IG6600
Administration Manual

Environment

The equipment you have purchased must not be disposed of with household waste. You should return these to your distributor if they are to replace or dispose of them in an approved recycling centre.

FCC Statement

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against radio interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at is own expense, will be required to take whatever measures are necessary to correct the interface.

Important Notice :

1. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

CE Declaration of Conformity

This equipment complies with the requirements relating to electromagnetic compatibility, EN55022 class B for ITE and EN 50082-1. This meets the essential protection requirements of the European Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Copyright Notice

Trademarks

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WARNING!

1. Read these installation instructions carefully before connecting the equipment to its power adapter.
2. To reduce the risk of electric shock, do not remove the cover from the equipment or attempt to dismantle it. Opening or removing covers may expose you to dangerous voltage levels. Equally, incorrect reassembly could cause electric shock on re-use of the appliance.
3. Do not expose the equipment to fire, direct sunlight or excessive heat.
4. Do not expose the equipment to rain or moisture and do not allow it to come into contact with water.
5. Do not install the equipment in an environment likely to present a Threat of Impact.
6. You may clean the equipement using a fine damp cloth. Never use solvents (such as trichloroethylene or acetone), which may damage the equipement's plastic surface. Never spray the equipment with any cleaning product whatsoever.
7. The equipment is designed to work in temperatures from 0°C to 45°C (32°F to 104°F).
8. The equipment must be installed at least 1 meter from radio frequency equipment, such as TVs, radios, hi-fi or video equipments (which radiate electromagnetic fields).
9. Do not connect the LAN/WAN port to any network other than an Ethernet network.
10. Do not attempt to upgrade your equipment in an unstable power environment. This could cause unexpected damages.
11. Do not work on the system during lightning storms. Please disconnect all cables.
12. Children don't recognize the risks of electrical appliances. Therefore use or keep the equipment only under supervision of adults or out of the reach from children.
13. No repair can by performed by the end user, if you experience trouble with this equipment, for repair or warranty information, please contact your supplier.

Electrical Powering:

The IG6600 can be powered with correct power adaptor, the power adaptor must be 12V/1.5A. Any damage caused to the IG6600 as a result of using unsupported power adaptors will not be covered by the manufacturer's warranty.

Product Disposal Warning:

Ultimate disposal of this product, accessories, packing, especially the batteries should be handled carefully for recycle and nature protection in accordance with national laws and regulations.

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. No change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

Table Of Contents

1. Introduction

The Tecom IG6600 is an all-in-one solution which has rich feature set of IP PBX telephone systems and IP networking systems. It has business essential PBX features such as an auto-attendant, voice mail, multi-line appearances, three way call conferencing, intercom, music on hold, call-forwarding and much more. The IG6600 system opens up access to the benefits of VoIP, including low cost long distance service, and one network for both voice and data.

The IG6600 is so easy to configure that a fully working system can be set up in minutes. Plug and Play feature allows new telephones to be automatically detected and registered when they are connected. The IG6600 is so easy to be managed and configured by its integrated web server.

The IG6600 system can work with any SIP based IP Phone. However, it is the best to work with Tecom's IP Phones IP2032, IP2061 and IP2062 to take advantages of powerful business features such as plug & play, all paging/group paging, multi line appearances, etc….The IG6600 has a FXS port to support traditional analog devices such as telephone, answering machine, FAX machine.

It must not be an ordinary Integrated Access Device (IAD) solution, nor a mere ATA solution, but with elaborated and popular Voice-centric features, so as to be able to penetrate conventional Voice-centric market

Interfaces

- WAN Interface: 10BASE-T/100BASE-TX/1000BASE-T Gigabit Ethernet port
- CO Interface: 6 FXO (Loop Start, for PSTN)
- Analog Device Interface: 1 FXS (For Analog Telephone or FAX)
- LAN Interface: 1 Ethernet (10BASE-T/100BASE-TX)
- Built-in 802.11b/g/n WiFi access point

- USB Interface : Connects to your USB storage devices, USB printer or 3G dongle.

Terminals

- 1 Analog Terminal (Analog Telephone or FAX)
- 24 IP Stations (Wired or WiFi IP-Phone)

Basically, the Administration is required to do the following things:

(1) To understand the architecture, resources, and devices of whole environment which will be involved with the VoIP communications.

(2) To build a common setting file for most users.

(3) To configure each phone and install them into the network.

(4) To configure each interfaces and install them into IG6600.

(5) And to solve the problems that users encounter during operation.

2. Getting to Know the IG6600

2.1 Front Panel

The front panel contains several LEDs that indicate the status of the IG6600.

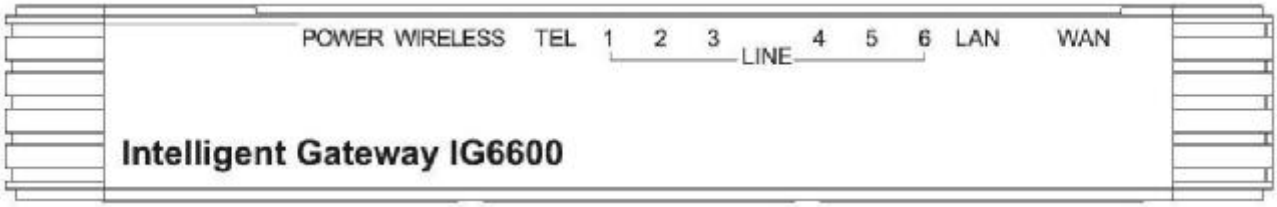


Figure 2-1. Front Panel of IG6600

LED Name	Color	Status	Description
POWER	Red/Blue	Red On	Firmware updating
		Blue Flashing	System booting up
		Blue On	System initialized and running
		Off	Power off
WIRELESS	Blue	On	Wireless LAN is active
		Off	Wireless LAN is idle
LINE (1-6)	Blue	Off	PSTN Line is idle
		On	PSTN Line is active
TEL	Blue	Off	Phone is idle
		On	Phone is active
LAN	Blue	On	LAN is connected
		Off	LAN is not connected
		Flashing	LAN activity present (traffic in either direction)
WAN	Red/Blue	Blue On	WAN is connected and IP is obtained
		Red On	WAN is not conneced or no IP assigned
		Flashing	WAN activity present (traffic in either direction)

2.2 Rear Panel

The rear panel contains the ports for the IG6600's data and power connections.

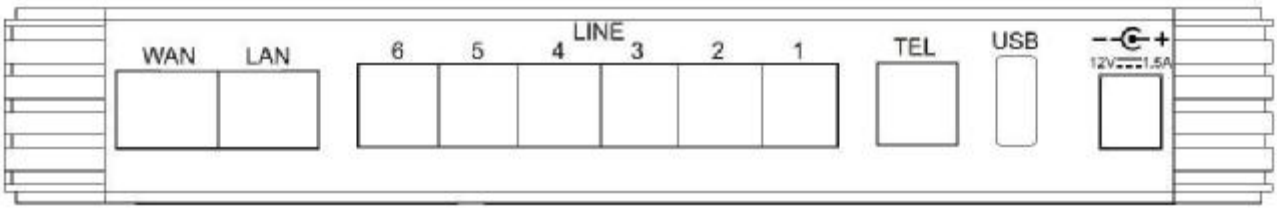


Figure 2-2. Rear Panel of IG6600

Label	Function
WAN	RJ-45 connector: Connects the device to your cable modem, or to your ADSL Modem. It's to connect to the remote network.
LAN	RJ-45 connector: Connects the device to your PC's Ethernet port, or to the uplink port on your LAN's hub.
Line (1-6)	RJ-11 connector: Connects the device to your PSTN lines.
TEL	RJ-11 connector: Connects the device to your analog phone.
USB	Connects to your USB storage devices, USB printer or 3G dongle
Power	Connects to the supplied power converter cable.

3. IG6600 Voice General Features

3.1. Access Control for Web Page

The Access Control settings allow the System Administrator to configure the Web Port, Service Control List, IP Address Access Control mode and password for Administrator, Supporter and User.

IG6600 also provide an external user access to the internal IP phone's Web page. The Registered Phone page will list all registered phones with their IP links. Clicking a specific link will open that specific IP phone's Web page.

IG6600 provides three Access mode for Web Page

- Administrator mode: unrestricted access and program
- Support Mode: allow an ISP technician to maintain and run diagnostics
- User Mode: view some configuration settings and statistics.

3.2. Answering Position

For incoming calls from the Public Switched Telephone Network (PSTN) (via analog CO or FXO ports), the IG6600 provides the flexibility to ring specific destinations. The IG6600 provides the ability to ring Auto Attendant. The IG6600 also provides the ability to simultaneously ring up to 24 extensions when programmed in a ICD Hunt Group, or the Operator in accordance with the system service mode (day or night). The user can also assign a line to ring directly to an extension. Incoming VoIP calls from a registered ITSP can be programmed and routed in the same manner as the analog CO (FXO) ports.

3.3. Auto Attendant & Voice Mail

The IG6600 Auto Attendant can greatly enhance business productivity by providing either a full-time automated attendant to handle all incoming system calls or part-time automated attendant to handle overflow traffic. The Voice Mail Module provides up to 16 hours recording time that are shared by all extensions. The system can handle four simultaneous calls with following functions.

- **Auto Attendant Functions**

  The Auto Attendant provides an incoming caller with a customized welcome greeting and specific prompts that will describe the options available to the caller.

  - Play the welcome greeting messages depending on the system service mode: Day, Night, Noon, and Holiday.
  - Route the call to the appropriate destination (extension or UCD group) with the dialing digits.
  - Leave a message to a particular mailbox.
  - Make an outside call via another trunkline (PSTN or SIP-Trunk).
- **Voice Mail Functions**

- Delete, save, or skip messages.
- Forward messages to other mailboxes.
- Envelop information indicating the time and date of the message received; sender information will also be included in the email notification.
- Change personal greeting and password.
- Expert mode support (playback controls when reviewing messages).
- Send a notification via email when a new message is left.
- Send voice message as the attachment of the email in WAV format.
- The maximum recording length for each call is 1800 seconds.
- When 90% of the VM size is used, it shows “Message Full” on the all IP20xx’s LCD.
- For each extension, the maximum number of Voice Mail is 200.
- For each leaving message, it's saved 1 - 7 days or infinite

- **Voice Messages**
  - Provide two languages service for the all voice files.
  - Provide G711-ulaw voice files.
  - Administrators can record the all voice messages by themselves.
  - Administrators can update, backup or delete the all voice messages from/to the PC.

3.4. Auto Provisioning

WAN Management Protocol (TR-069) allows an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device. Firmware upgrade or vendor configuration file backup can be done remotely on ACS server. Select the desired values and click "Save Settings" to configure the TR-069 client options.

IG6600 also provides an Auto Provision Server (APS) to update IG6600 FW, Update / Retrieve IG6600 Configuration and the registered IP20xx FW

3.5. Basic Call

To make an intercom call, dial a Station number (IP Terminal, POTS) or a Voice Mail number.

To make an outside call, dial a phone number. IG6600 chooses a line (PSTN line, IP trunk, another IG6600) via Call Routing Table to dial out. If it includes “p” in the phone number, and the call is dialed through PSTN Trunk, it will pause for a pre-configured time.

To make an outside call, dial a PSTN, an IP Trunk or a Trunk Group number first. After hearing dial tone, dial the phone number.

3.6. Call Abandon

For every PSTN call, IG6600 provides the facility to monitor the call status. If the remote party hangs up, the ongoing call must be terminated.

The PSTN line monitor is accomplished through monitoring the loop-break signal, polarity reversal or busy tone. The value range of loop-break signal is: 0/100/200/…/1000 ms.

3.7. Call Operator (Call Attendant)

IG6600 supports one operator. Any extension can be designated as the operator through system configuration.

One primary operator may be assigned in the system. The standard IP phone will serve as the operator telephone. When assigned as operator, this extension supports general system functions.

While the internal extension dials Operator Directory Number ("0" at default), or the outside party dials "0" when Auto Attendant plays the welcome message, these calls will be stored into Operator Queue. The Operator is First-In-First-Out to service these calls. At the waiting time, the calling party will be on Music-On-Hold state.

A second (alternate) operator position may be designated for common sharing of incoming operator calls during peak traffic period.

3.8. Call Pickup – Group

You may answer trunk calls at another extension using the function. The feature allows you to easily access calls ringing via the single digit “*”.

3.9. Call Restriction

IG6600 provides sophisticated monitoring of digits dialed on PSTN/IP Trunks. If a digit or range of digits dialed on a Trunk line is inconsistent with the dialing extension’s COS, the call is denied. This calling COS criteria can be applied to local calls, long distance calls, and specific numbers that are considered allowed in areas where other numbers may be restricted.

In the call restriction table, it provides the following programming items:

- **From/To**

  The allowed intervals are made up of a From and To entry which establish a numeric range. For example, an entry of “From 1700” , “To 1800” would include the following range of numbers as the leading: 1700, 1701, 1702, …1799, 1800. Each From/To entry can be from 1 to 13 digits long and may contain any digit 0-9. The “From” entry must be less than or equal to the “To” entry.Each From/To entry can be from 1 to 13 digits long and may contain any digit 0-9, or X (X representing any digit). The :From” entry must be less than or equal to the “To” entry.

- **Trunk Access**

  IG6600 checks the field only when a call matches the associated allowed interval. If the field is set to “Y”, the entry is valid when the trunk is accessed previously. If the field is set to “N”, the trunk isn’t accessed previously. The trunk will be accessed through Call Routing Table. If he option is set to “YN”, the entry is valid no matter the trunk is accessed or not previously.

- **COS**

  The COS setting is defined by the allowed intervals. “Y” allows an extension with the COS or higher priority to dial the number(s) specified in that range.

3.10. Call Routing

The Call Routing feature automatically routes outgoing calls using the most appropriate route. The appropriate route is determined based on the number dialed. If necessary, IG6600 can automatically modify the dialed number by deleting and inserting digits.

The call routing destination is a PSTN line, an IP line, a line group or another IG6600. It allows you to configure each entry in the Call Routing Table which contains a routing rule for outgoing calls:

- From/To setting defines the number range
- Min/Max defines the match length
- Del/Insert can change the target number
- Destination defines the outbound call interface trunk

3.11. Caller ID Detection/Generation

IG6600 provides the ability to detect the calling party identification provided by CO via PSTN lines or by Uplink Server via IP trunks. This data when received by the telephone carrier will be displayed on all ringing IP phones.

IG6600 also provide Caller ID Generation to the Caller ID equipped Single Line Telephone.

3.12. Class Of Service (COS)

IG6600 provides 8 Classes of Service (COS) for assignment of outside line dialing-privileges. Each extension may be assigned one Day-COS and one Night-COS. The Extension COS is primarily used for restriction and control of long distance dialing. COS 0 is the highest priority. COS 7 is the lowest one.

3.13. Daylight Saving Time

Daylight Saving Time (DST) feature supports auto adjustment for daylight saving time. It allows you to configure the Daylight Saving Time (DST) which includes support for auto adjustment of daylight saving time.

- Internet Time: it obeys the international standard rule.
- Manual DST Rule: it allows you to define your own Daylight Savings Time Rule.

3.14. Default Set

Clear all settings and return the IG6600 set to the factory condition.

When rebooting the IG6600 to the default, some settings for the registered Tecom IP Phones (IP2032, IP2061 and IP2062) are reset to the default also.

- Line Keys
- Call Forward
- DND
- Page Deny
- Auto Answer
- Phone Lock
- Call Waiting

3.15. Direct In Dialing (DID)

IG6600 provides a Direct In Dialing Table for IP Trunks. It will be able to offer its individual phone number for each extension.

IG6600 provides 50 entries in the Direct In Dialing Table. Each entry includes

- DID Number
- Outgoing Call ID
- Extension Number
- Display Name

3.16. Direct Inward System Access (DISA)

The feature allows you to remotely access IG6600 lines to make the outside calls. The current PSTN/IP lines are all DISA lines. While ringing to Auto Attendant, the outside callers have direct access to extensions, PSTN/IP lines, Call Routing and Trunk Groups.

The out-calling is secured by means of verified passwords against the assigned extension number. The use is accomplished only when a valid extension number has been entered and when the password entered matches that stored for the extension number entered.

3.17. Emergency Call

IG6600 allows you configure five Emergency Call numbers and lines with which Emergency Calls are sent out. Any user can make an Emergency Call regardless of its Call Routing table, Call Restriction, and Phone Lock, when they dial a pre-configured Emergency Call number. The numbers of Emergency Call must not collide with the numbers in Numbering Plan.

It allows to program 5 emergency numbers. “911” is in it by default.

3.18. Extension Password

All extensions of the IG6600 system have an associated User Password. The Password is applied to Voice Mail service, and some system feature settings (Phone Lock, COS Following, DISA).

3.19. Fax/Modem

IG6600 supports FAX/modem tone detection and auto-fallback to G.711.

3.20. Flash – Analog Port (SLT) Flash Recognition

Flash is the momentary operation of the hook-switch at the analog device, which can be deciphered by the IG6600 system in such a way that the previous call in progress is held, or placed in a status of transfer awaiting further instructions from the user.

3.21. Gateway to Gateway (IGW Group)

A call may be placed from one IG6600 to another IG6600 via the Call Routing Table. The call Routing Table allows the user to make a direct call to an extension in another

IG6600 It also allows the user to share the PSTN or IP Trunks in another IG6600 to make an outside call.

In an IGW Group, one Master IG6600 and at most 9 Slave IG6600s are available. Master IG6600 must have a public/static IP address. Master and all Slave IG6600 share one password for authentication. If the IP address of Master is set in a Slave IG6600, Slave IG6600 sends its IP address, name, and password to the Master. Master IG6600 verifies the received password and name. If the password is valid and the name is not duplicated, Master IG6600 sends the IGW list to all Slave IG6600s.

3.22. ICD Group (Hunt Group)

IG6600 supports 4 ICD Groups. Each ICD Group can have up to 25 members. There are three kinds of ICD Group mode – All Ring, Linear, and Distributed. For All Ring mode, incoming Trunk calls ring all member extensions simultaneously. For Linear mode, incoming call is put into a queue and then distributed from the first extension. For Distributed mode, it is the same as Linear but selection of an extension is uniformed.

If more than one call rings at the same time, the first agent to go off hook will be connected to the call that has been ringing the longest.

For unanswered Trunk call, it will be forwarded to a Reroute destination. The Reroute destination can be Auto Attendant or the first member's Voice Mailbox.

The missed ICD Group calls are recorded in ICD Call Log. It records the last 100 missed ICD Group calls.

3.23. IP Trunk

IG6600 can register up to 8 SIP Uplink Servers. The extensions may make a call to the users of the Uplink Servers, or any user in the world through the Uplink Servers.

- SIP messages, including INVITE, re-INVITE, ACK, CANCEL, OPTIONS, BYE, REGISTER, INFO, REFER, SUSCRIBE/NOTIFY and REPLACE messages
- SIP Proxy, SIP Outbound Proxy, Registrar, and Outbound Registrar
- Auto Registration when Power-on or period
- Session Timer support
- Support IP address, domain name, user name, display name for SIP URL.

3.24. Message Waiting Indication (MWI)

It's a Voice Mail feature. When somebody leaves messages, the router will inform the phones, and phones' LCD will display new voice mails information, and its lamp will flash accordingly.

3.25. Music on Hold

Any PSTN/IP line calls placed on hold will give music to the other external party.

3.26. Numbering Plan

The Numbering Plan refers to the structure of dialed access to the various resources that are part of the system. IG6600 also allows for a very flexible configuration numbering for the various system resources.

IG6600 provides the following resources to be programmed in Numbering Plan.

- Extension Number
- Operator Number
- Voice Mail Service Number
- PSTN Line Number
- IP Trunk Numbers
- All Paging Number
- Paging Group Number
- ICD Group Number
- System Speed Dial Number
- Call Park Number
- Pick Up Number

3.27. Pause Insertion

Pause Insertion is used to generate an intentional delay in dialing on Outgoing FXO line calls. A pause can or a combination of pauses may be stored in the dialed number, Call Routing Table or a Speed Dial number. It uses “P” or “p” as the Pause digit.

3.28. PSTN Backup

In case of power failure, IG6600 automatically switches the first PSTN line to the Single-line analog phone. The other PSTN lines are not supported

3.29. Registration Server

The IG6600 combines Proxy and Registrar servers in its application. For a Registrar server, it acts as the front end to the location service for a domain, reading and writing mappings based on the contents of REGISTER requests. The location service is then typically consulted by a Proxy server.

3.30. Service Mode

IG6600 provide Day and night settings for each weekday in service mode page. And during different time, Trunk incoming call will be forwarded to different extensions according to the settings.

3.31. Station Message Detailed Recording (SMDR)

The feature allows the administration to track all incoming and outgoing outside call traffic, chronologically by extension number. SMDR is output from the standard Syslog (None/LAN/WAN/Both)

SMDR information includes Trunk Line used, extension number, time and date the call was placed, number dialed, duration of the call. IG6600 will also provide Outgoing Call Duration Start Time to the PSTN call.

3.32. System Speed Dial

IG6600 stores frequently dialed numbers. These Speed Dial Numbers are accessed for dialing by the associated Speed Dial Directory Numbers. The Speed Dial Directory Numbers are assigned in Numbering Table. The Speed Dial is only for outgoing calls.

IG6600 stores up to 100 Speed Dial Numbers. In the Speed Dial Number, it's allowed to store Phone number up to 20 digits in length. Call Restriction and Call Routing are applied and extensions may utilize only those numbers allowed based on their extension COS. The actual dial sent to trunk is not displayed on IP phone's LCD.

3.33. System Time & Date

The IG6600 system provides a built-in time clock to track System Time for reference in certain features such as day/night service mode. This clock has the ability to automatically adjust with network NTP server through internet.

System Time & Date can be applied to Tecom IP20xx Phone if it's on IG6600's LAN side, or on WAN side with the same Router as IG6600's..

3.34. Trunk Group

The Trunk Group feature is used to assign each PSTN Trunk and IP Trunk to a specific Trunk Group. Each Trunk can be assigned to only one Trunk Group. The Trunk group assignment is used for Trunk pool access. If setting some PSTN trunks and some IP trunks into the same Trunk Group, the trunk access sequence will depend on the access priority. The GW6000 provides up to 4 Trunk Groups. All PSTN Trunks are assigned to default Trunk Group 1 and all IP Trunks are assigned to default Trunk Group 2. For the four groups you can choose IP first or PSTN first if programming PSTN and IP Trunk in the same group. This will take effect if call routing entry's destination has been set as Group choice

3.35. Wizard Setup

The IG6600 has a setup Wizard that provides the system administrator with a series of step-by-step operations. The setup Wizard starts automatically when the IG6600 is powered up for the first time, or if the system is reset to default configuration via the reset switch on the IG6600 unit. The following programming/operation areas are supported through the setup Wizard:

- WAN Setting
- LAN Setting
- Wireless Basic
- Wireless Security
- Internet Time
- Numbering Plan
- IP Trunk
- Call Routing Table

4. IG6600 Voice Extension Features

IG6600 follows SIP standard to serve SIP phones. Basically, telephone features that meets SIP standard can be applied in IG6600.

Tecom IP20xx phone (IP2032/IP2061/IP2062) supports many phone features. But for adding some traditional KTS features that are not defined definitely in SIP protocol, some specified information are transmitted between IG6600 and IP2xxx Phones. This section introduces these special phone features. Some features are only for IP20xx phones and/or FXS phone.

The following features depend on whether the phone provides.

Feature	Tecom IP20xx	FXS	Other SIP Phone
Agent Log On/Off – ICD Group	Yes	Yes	No
Alphanumeric Display	Yes	Depends	Depends
Automatic Callback Busy	Yes	Yes	No
Auto Hold	Yes	No	Depends
Call Fork	Yes	Yes	No
Call Forward – Direct	Yes	Yes	Depends
Call Forward – Busy	Yes	Yes	Depends
Call Forward – No Answer	Yes	Yes	Depends
Call Forward – DND	Yes	Yes	Depends
Call Forward – Follow Me	Yes	Yes	No
Call Hold	Yes	Yes	Depends
Call Log	Yes	No	Depends
Call Park	Yes	No	No
Call Park Answer	Yes	Yes	Yes
Call Waiting	Yes	Yes	Depends
Caller Blocking	Yes	No	Depends
CO Flash	Yes	No	No
Conference 3 Way	Yes	No	Depends
COS Following	Yes	Yes	No
Default Setting	Yes	Yes	Depends
Distinctive Ringing	Yes	No	Depends
Do Not Disturb	Yes	Yes	Depends
DSS/EDM	IP2061 Only	No	No
Feature Key Programming	Yes	No	No
Flash – CO/PBX Lines	Yes	Yes	No
Hold Reminder	Yes	Yes	Depends
LCD & Interactive Buttons	Yes	No	Depends
Multi-Line Appearance	Yes	No	Depends
Mute	Yes	No	Depends
On Hook Dialing	Yes	Depends	Depends
Page (All/Group) - Paging	Yes	Yes	Yes
Page (All/Group) - Paged	Yes	No	No
Page Answer	Yes	No	No
Page Allow / Deny	Yes	No	No
Phone Book	Yes	No	Depends

Phone Lock/Unlock	Yes	Yes	No
Plug and Play	Yes	Yes	No
Reminder Tone	Yes	Yes	Depends
Service Mode Switching	Yes	Yes	No
Transfer	Yes	Yes	Depends
Trunk Ring Type	Yes	Yes	Depends
Web Management	Yes	No	Depends
Volume Control	Yes	Depends	Depends

NOTE: the word “Depends” means that the features depend on whether the phone provides.

4.1. Agent Log On/Off – ICD Group

Extensions can log on or log off from ICD group.

Enable Agent Log On feature, dial *91.

Disable Agent Log On feature, dial **91.

If an extension disables the Agent Log On feature, the extension should log off from all ICD groups it belongs to.

4.2. Alphanumeric Display

The IP Phone extension provides a graphic LCD that supports 64 alphanumeric characters. The LCD enhances many system features.

4.3. Automatic Callback Busy

IP20xx supports Automatic Callback Busy. When the callee has no session resource, the caller will hear busy tone.

The caller can dial “6” to get the Automatic Callback Busy feature.

The confirmation tone will be heard and come back to idle status. When the callee is no longer in busy status, the caller will hear call back ring.

Disable the Automatic Callback Busy feature, dial *66.

4.4. Auto Hold

You may enable the feature to simplify call handling and avoid accidental “lost” calls. Hold will automatically place any call that is currently connected at your phone on hold whenever a Trunk line button is pressed.

4.5. Call Fork

IG6600 supports to ring another extension or an outside destination via IP Trunk simultaneously when the extension gets an incoming call. When the call is answered by one of the both parties, the call at the other party will stop ringing automatically.

To Activate (Type: 0 – ICM; 1 – Outside; 2 – Both)

*26 + Type + Ext No

*26 + Type + * + (PSWD) + * + Outside Number

To Cancel

**26

Call Fork is executed if Caller is IP20xx, FXS or Trunk. Call Fork is not applied to Operator call, Paging call and ICD call

4.6. Call Forward

Call Forwarding reroutes incoming calls from one extension to another destination. The destination of a call forward can be another extension, voicemail box or an outside phone number (External Call Forward; ECF).

IG6600 support the following feature access codes to program Call Forwards for IP20xx and FXS. It includes a “Type” setting for each Call Forward. It can be programmed to “ICM”, “Outside” or “Both” (Type: 0 – ICM, 1 – Outside, 2 – Both).

Direct Call Forward:
Forward all of the calls without regard to the extension status.
To enable, dial *21 + Type + Ext/VAA/ICD No.
*21 + Type + * + (PSWD) + * + Outside Number
To disable, dial **21.

Busy Call Forward:
Forward the calls if the extension is busy.
To enable, dial *22 + Type + Ext/VAA/ICD No.
*22 + Type + * + (PSWD) + * + Outside Number
To disable, dial **22.

No Answer Call Forward:
Forward the calls if the extension doesn’t answer the call within No Answer Time.
To enable, dial *23 + Type + Ext/VAA/ICD No + * + Time.
*23 + Type + * + (PSWD) + * + Outside Number + * + Time
To disable, dial **23.

DND Call Forward:
Forward the calls if the extension enabled DND.
To enable, dial *24 + Type + Ext/VAA/ICD No
*24 + Type + * + (PSWD) + * + Outside Number
To disable, dial **24.

Follow Me Call Forward:
Forwards calls at your extension to the extension where tou are currently working.
To enable, dial *25 + Type + * + Ext No + * + Password
To disable, dial **25 + Ext No + * + Password

These Call Forward features can also be set/cancelled in web page of IP20xx.

4.7. Call Hold

Trunk and Intercom calls can be placed on hold at any extension. Any PSTN/IP line caller placed on hold will hear the Music On Hold. The held trunk can be resumed by other extensions by pushing Feature Key.

For the Single Line phone, it’s to put a call on hold, press flash then hang up (optional). It’s to return to the original call, press flash or pick up the phone.

4.8. Call Log

The IP20xx phone can store a call log for your reference. To access your call log, use the LCD menus. There are three types of Call Logs - Missed Calls, Received Calls, or Dialed Calls. To dial from a listing, press the soft keys corresponding to the LCD menus

display.

4.9. Call Park / Call Park Answer

The feature allows you to “park” a call at IP20xx extension. It also allows any extensions to retrieve a parked call. Calls are parked by pressing the Park feature key. The call parked can be retrieved by dialing the Call Park code or pressing the Parked feature key.

4.10. Call Pickup – Individual

You may answer the calls at another specified extension. The feature allows you to easily access calls ringing via the feature access code.

*53 + Extension Number

4.11. Call Waiting

If Call Waiting is enabled for a specific IP20xx station, an alert (muted ring) will be played on the called party IP20xx when a second call is received and the IP20xx is in use.

To enable Call Waiting, dial *98

If Call Waiting is disabled for a specific IP20xx station, the IP20xx will return a busy tone to any calling party while the IP20xx is in use.

To disable Call Waiting, dial **98

4.12. Caller Blocking

IP20xx can block up to 10 phone numbers from reaching you at your phone when a caller attempts to call you from one of these numbers.

4.13. CO Flash

FXO Line is programmed setting that will determine what flash timing will be presented to the CO/PBX when the extension issues a Hook-Flash command while connected to a FXO Line.

4.14. Conference – 3 Way

The Conference feature allows the user to connect two calls into a single conversation.

4.15. COS Following

You can temporarily change the individual Class of Service of each extension on a per call basis. You may want to do this when the user goes to the office of low-priority COS extension and try to make an outgoing call, the user can use the function to use their own COS.

When using the COS Following feature, the station COS change will revert to the station’s original COS after a one minute idle time-out.

To set COS Following, dial *55 + (phone number) + (password)

4.16. Default Setting

When the feature is activated, the extension will return to default settings. It will affect the following options:

Call Waiting enabled

Paging Accept
Default Feature Key Setting
Phone Lock
Call Forward
DND

To activate the Default Setting feature, dial *69.

4.17. Distinctive Ringing

Distinctive ring cadences can be selected allowing adjacent users to discern which extension is ringing. It also provides different ring tones for intercom and trunk calls.

4.18. Do Not Disturb (DND)

Extension users can enable DND to stop incoming PSTN or IP Trunk calls from ringing at their phone. The DND on an extension can be allowed or denied through the feature access code.

To enable the Do Not Disturb feature, dial *4.
To disable the Do Not Disturb feature, dial **4.

DND and FWD can be set independently. If multiple features are set at the same time, it is applied in the order of Direct FWD > DND > Busy/NoAnswer FWD.

The DND feature can also be set/cancelled in LCD menu or web page of IP20xx.

4.19. DSS/EDM

IG6600 supports to provide the status of the extensions and trunk lines. The status can be shown on the LED of IP20xx's flexible keys. For IP2061, it supports EDM module that can have 24 more keys.

4.20. Feature Key Programming

Feature Keys can be programmed by phone users. A feature key can be programmed for line appearance.

To program a Feature Key, dial *70 + (Feature Key number: 01 – 04/28$^{(*)}$) + (PSTN, IP Trunk, Trunk Group number, Call-Park number or Extension number)

Note: IP2061 supports EDM module, it provides 24 more keys for feature access.

4.21. Feature Button Reset

The feature is used to reset all feature buttons to the default setting.

To reset the Feature Buttons, dial *68 + (Password)

4.22. Hold Reminder

IP20xx provides a programmable timer to remind you that a call has been left on Hold. When enabled, you will hear one ring tone repeated each time the selected hold time expires.

4.23. LCD & Interactive Buttons

The IP20xx phone is equipped with a Liquid Crystal Display to enhance features

operation. The IP20xx also incorporates four-screen-prompt and interactive soft keys that simplify feature operation.

4.24. Multi-Line Appearance

IG6600 provides PSTN line and IP line status to IP20xx.
Trunk LED:

Dark	–	the line is Null or Idle
Fast Flash	–	the line is ringing
Slow Flash	–	the line is held
Lit	–	the line is in talk

4.25. Mute

The Mute feature allows the user to disable the handset transmitter or the speakerphone microphone.

4.26. On Hook Dialing

IP20xx phone extensions may make outgoing calls without lifting the handset and monitor the dialing status through the built-in speaker. The button lamp is lit when dialing.

4.27. Paging (All/Group)

Paging function can be initiated from any extension in the IG6600. Dialing a Paging Group Directory number allows an extension to broadcast a page to all assigned members of the selected paging group.

IG6600 provides a Paging Range to define the paged extensions.

- LAN: the all assigned extensions on LAN side are paged.
- WAN: the all assigned extensions on WAN side and the extensions are connected to the same router with IG6600 are paged.
- Both: the all extensions on LAN and WAN are paged.

When receiving a Paging call, the paged IP20xx extension can answer the call by pressing the “Answer” soft button.

IG6600 provides 3 Paging Group. Each Group can have 24 extensions.

4.28. Paging Allow/Deny

You can block one-way pages (internal, group, and all page) over the IP phone speaker by dialing the Page Deny code.

To enable Paging Deny, dial *99
To disable Paging Deny, dial **99

4.29. Phone Book

The IP20xx provides users with a Phone Book, with each entry containing a user programmed Phone Number and User Name. The phone number can be an extension number, phone number, or IP address.

4.30. Phone Lock/Unlock

You can use the Lock feature to prevent unauthorized trunk calls from being made from extension. A locked extension continues to receive incoming calls, and a user can continue to place and receive intercom calls. Outgoing Trunk calls are blocked.

To lock the phone, dial *97 + (Password)
To unlock the phone, dial **97 + (Password)

4.31. Plug & Play

While connecting IP20xx to IG6600's LAN port, it will register to IG6600 automatically. IG6600 will also assign a valid extension number to the phone directly.

When IP20xx and IG6600 connect to the same Router, iG6600 will assign a valid extension number to the IP20xx also.

4.32. Reminder Tone

Play stutter dial tone to remind the user that DND or DCFW is enabled at your extension. If having MWI, it also plays the stutter dial tone

4.33. Service Mode Switching

The feature can be used by Operator phone only. Operator uses a programmed key or by feature access code to change GW6000 Service Mode.

*79 + (Service Mode; 1/2/3) + (Password)
//Service Mode: (1/2/3) → (Day/Night/Time) mode

4.34. Transfer

Transfer is used to deliver calls at your extension to another extension. It means that calls can be routed to IG6600's system destinations: an extension or an outside phone number.

IP20xx Phone supports Blind Transfer, Unscreened Transfer, and Screened Transfer.

FXS phone supports Unscreened Transfer, and Screened Transfer.

4.35. Trunk Ring Type

The IP20xx phones provide 10 types of ringing for indication of specific Trunk Line ringing. Every Trunk Line may be allocated one of the available Ring Types. When the feature is used, the specific ring type assigned to the Trunk Line is the ring type heard when the Trunk Line rings. The feature helps to identify the Trunk Line and the Trunk Group to which it belongs to.

The priority of the Trunk Ring Type for IP20xx is

- The Ring Type if the Caller ID exists in the Phonebook
- The Ring Type assigned by IG6600
- Phone's Ring Type

It also has the fixed, specified Ring for intercom call (IP20xx, FXS)

4.36. Volume Control

The IP20xx is equipped with a volume control that is used to adjust the various volume settings of the telephone. The following functions can be adjusted:

- Ringing
- Handset
- Speaker
- Headset

4.37. Web Management

The IP20xx is supported two-level web management. The Administrator has several pages to configure the IP phone. User is able to configure personal information by himself. User level is not including these two pages – software update, SIP configuration.

5. Quick Installation

This Quick Installation help to you install the product quickly and easily. For detailed instructions on installation, and further setup option, please refer to the configuration chapter.

5.1 Connecting the IG6600

(1) Place IG6600 in an optimum location.
(2) Connect the included Category 5 Ethernet network cable to the IG6600's LAN port or WAN port. Then connect the other end of the network cable to a switch or hub or directly your PC's Ethernet port. The IG6600 will then be connected to your 10/100/1000 network.
(3) Connect the AC power adapter to the IG6600's Power port. Only use the power adapter supplied with the IG6600. Use of a different adapter may result in product damage.
(4) Now that you have connected the IG6600 to your network, you are ready to begin setting it up. The Setup Wizard will take you through all necessary steps to help you to configure the IG6600 easily.

5.2 Wizard Setup

This system administrator can configure the IG6600 remotely or locally via a Web Browser. When IG6600 return to default factory settings, its LAN address is "192.168.1.1", and username is "admin1234", password is "123456".

Wizard Setup allows system administrator to select the appropriate operation mode and configure the corresponding setting step by step. The following eight items are supported.

- WAN Settings
- LAN Settings
- Wireless Basic
- Internet Time
- Numbering Plan
- IP Trunk
- Call Routing Table

In the configuration, the administrator presses "Next" or "Back" button to choose the setting item. If pressing "Save & Reboot", the settings will be saved and the IG6600 will be rebooted automatically. From now on, if entering the IG6600 Web configuration, it goes to home page "*IG6600 Configuration*" directly.

5.2.1 WAN Setting

There are three modes that you can configure WAN IP address: Static IP mode, DHCP mode, and PPPoE mode. You can also select to enable or disable Firewall and IGMP.

Note that Network Address Translation (NAT) function is default enabled and is not showing on the page to prevent it from being disabled.

This page shows that the current existing WAN interface in this system is Static IP mode. (Figure 5-1)

Figure 5-1. Wan Settings (Static IP mode)

The Dynamic Host Configuration Protocol (DHCP) is an Internet protocol for automating the configuration of computers that use TCP/IP. DHCP can be used to automatically assign IP addresses, to deliver TCP/IP stack configuration parameters such as the subnet mask and default router, and to provide other configuration information.

This page shows the current existing WAN interface in this system is DHCP mode (Figure 5-2).

Figure 5-2. Wan Settings (DHCP mode)

The Point-to-Point Protocol over Ethernet (PPPoE) requires a user name and password that your ISP has provided to you to establish your connection. This page shows that the current existing WAN interface in this system is PPPoE mode (Figure 5-3).

Figure 5-3. Wan Settings (PPPoE mode)

5.2.2 LAN Setting

This page (Figure 5-4) allows you giving LAN IP and Subnet Mask for LAN interface. You can also select to enable or disable DHCP Server and configure related settings for that mode.

Figure 5-4. LAN Settings

5.2.3 Wireless Basic

The page (Figure 5-5) allows you to configure basic feature of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scanning, set the wireless network name (also known as SSID), and restrict the channel set based on country requirement.

Figure 5-5. Wireless Basic

5.2.4 Internet Time

The page allows you to configure the NTP time server, so the IG6600 can have correct system time. It is useful such as reviewing the System Log. (Figure 5-6)

Figure 5-6. Internet Time

5.2.5 Numbering Plan

IG6600 has a flexible numbering plan so that phone or trunk numbers can be customized to meet a wild range of applications. It will check the numbers what you enter to prevent from conflicting among the all system resources. (Figure 5-7,Figure 5-8)

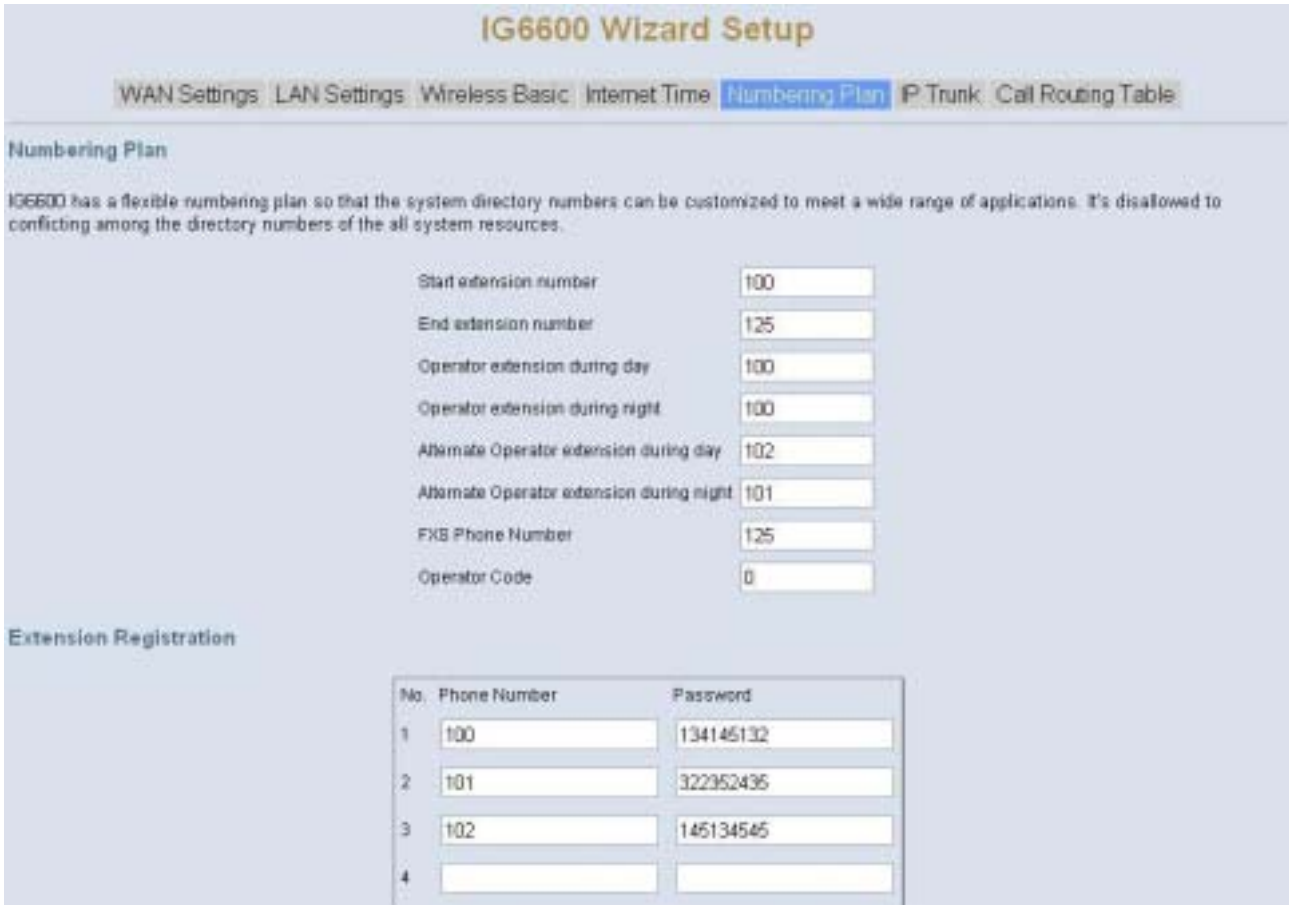


Figure 5-7. Numbering Plan – 1

Figure 5-8. Numbering Plan – 2

5.2.6 IP Trunk

IG6600 can register up to 8 SIP Uplink Servers. The extensions may make a call to the users of the Uplink Servers, or any user in the world through the Uplink Servers. (Figure 5-9,Figure 5-10)

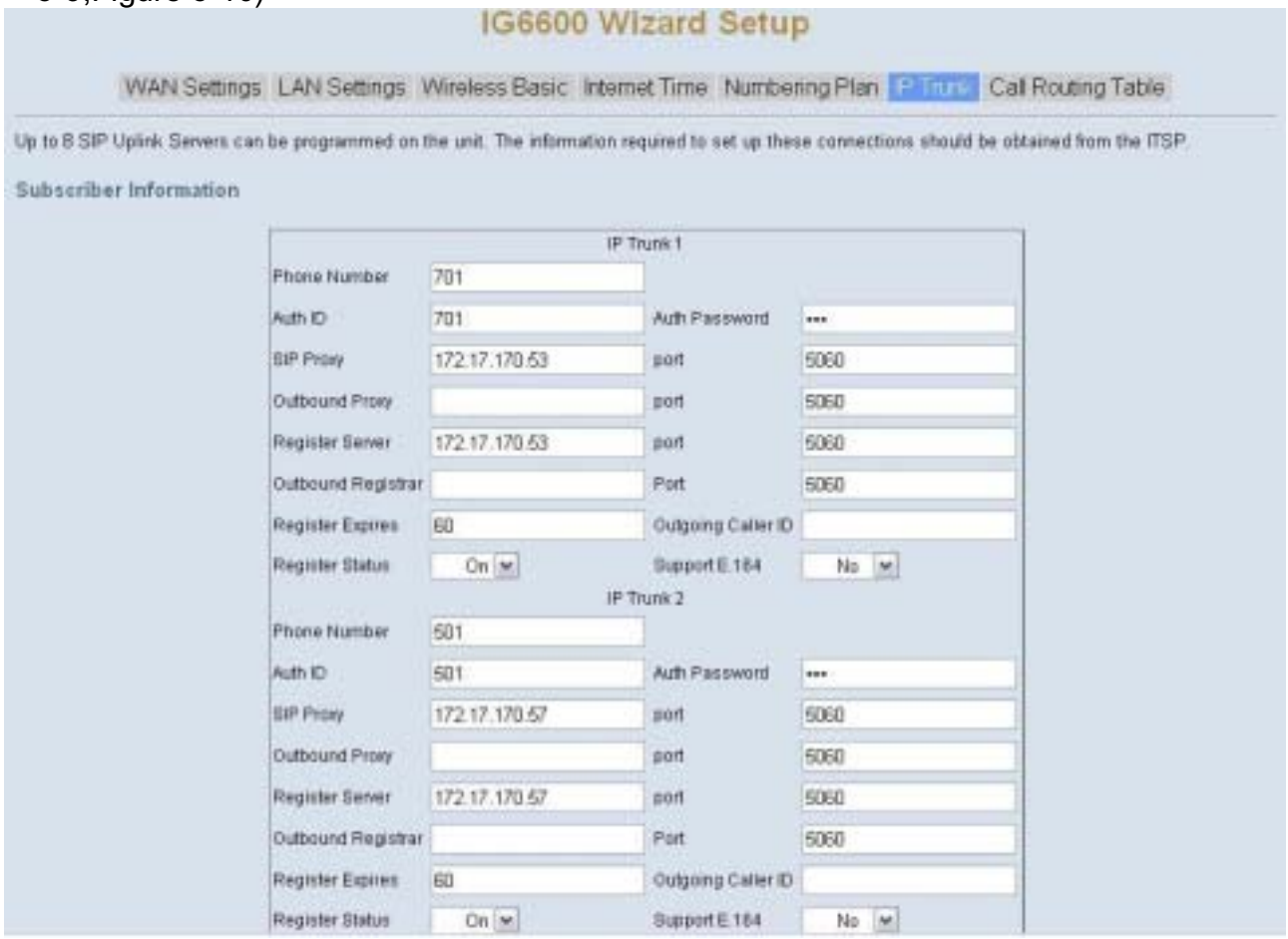


Figure 5-9. IP Trunk – 1

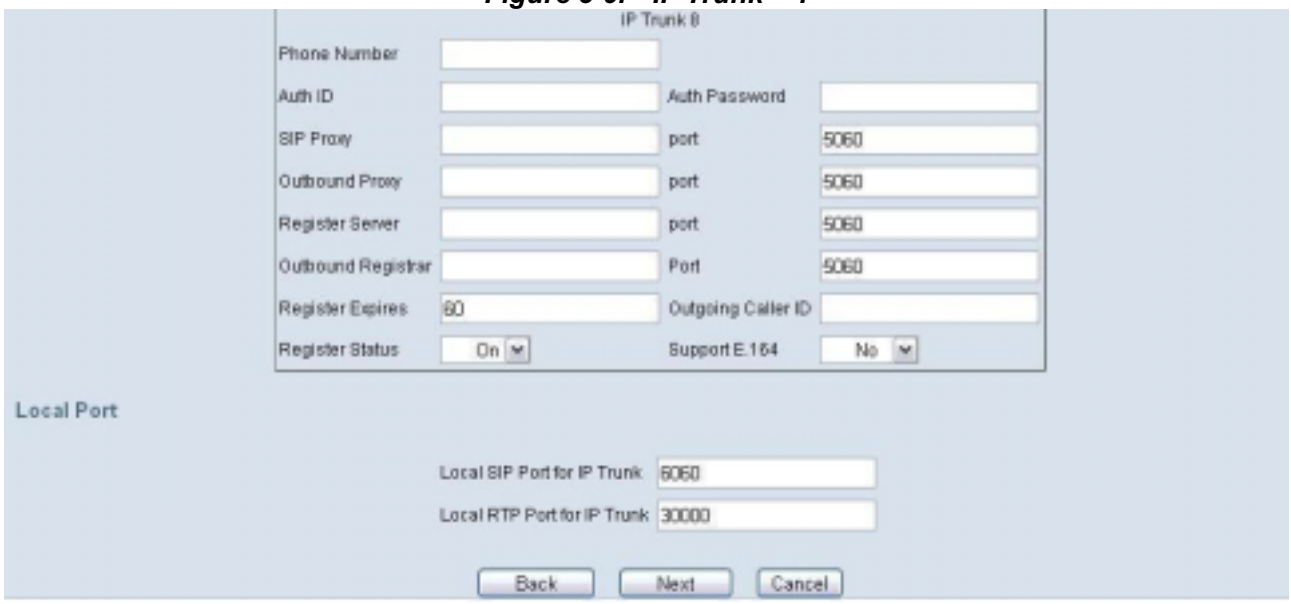


Figure 5-10. IP Trunk – 2

5.2.7 Call Routing Table

The Call Routing Table automatically routes outgoing calls using the most appropriate route. The appropriate route is determined based on the number dialed. If necessary, IG6600 can automatically modify the dialed number by deleting and/or inserting digits. (Figure 5-11,Figure 5-12)

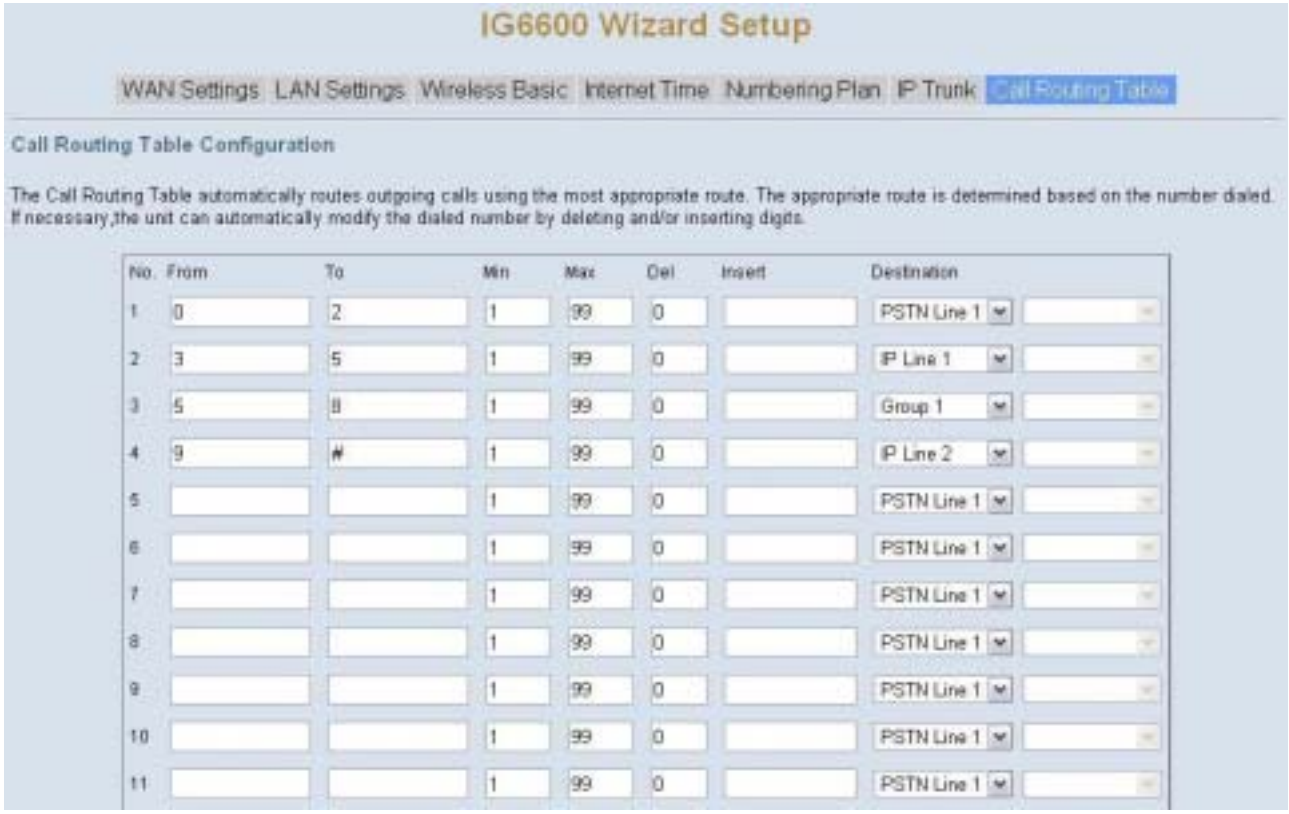


Figure 5-11. Call Routing Table – 1

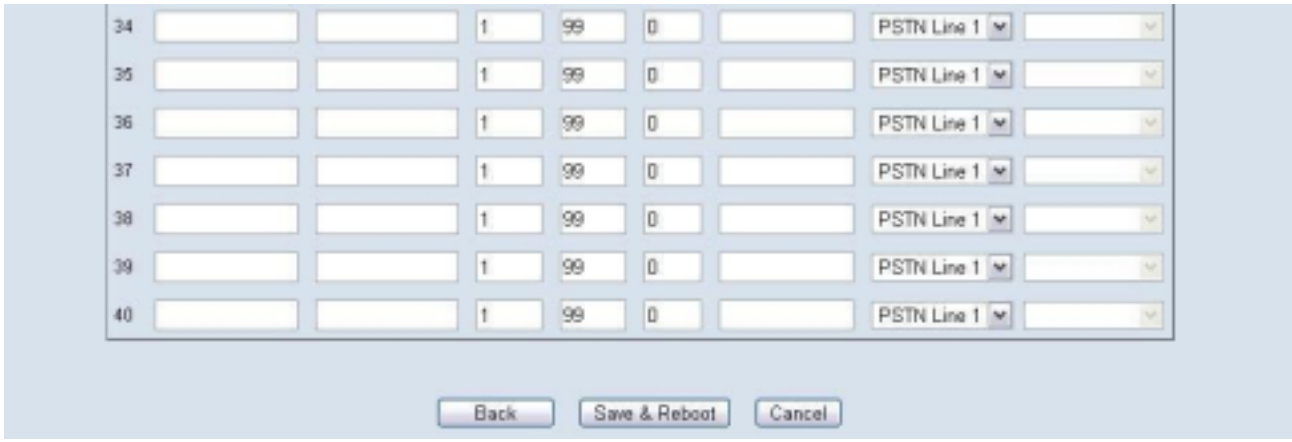


Figure 5-12. Call Routing Table – 2

5.2.8 Wizard Setup Finished

When you click “Save & Reboot” Button at above page, the wizard setup will save your setting and the wizard setup will be finished. Then the system will reboot as shown below.

Figure 5-13. Wizard Setup finished

Congratulations! The wizard setup of the IG6600 is complete.

For additional details, advanced configuration, or any other questions, refers to the next chapter.

6. Configuration

6.1 Setup

- Connect the IG6600 to PC.
- The default LAN IP of the IG6600 is 192.168.1.1.
- The default WAN IP of the IG6600 depends on upper router's DHCP server.
- For web login, the default user name is "admin1234", the default password is "123456".
- For telnet login, the name/password is the same as web login.

6.2 Establish The Connection

Enter the IP address of IG6600 from the Web Browser.

A Dialogue Box will pop up to request the user to enter username and password. (Figure 6-1)

Figure 6-1. Authentication

Please enter the management username/password into the fields then click the OK button (default username/password is admin1234/123456).

When the authentication is OK, the home page "*Device Info – Summary*" will be displayed. In the Web Configuration, it is divided into seven categories (Figure 6-2):

- Device Info
- Advanced Setup
- Wireless

- Mobile Network
- Voice
- Management
- Diagnostics
- Logout

Figure 6-2. Device Info - Summery

6.3 Device Info

This information reflects the current Status of IG6600 connection. It includes the following topics:

- Summary
- Statistics
- Route
- ARP
- DHCP

6.3.1 Summary

In the page (Figure 6-2) you can get the information reflects the current software version and connection status. It includes Device Info, Network Info and Date/Time.

6.3.2 Statistics

It's separated into two parts: LAN and WAN.

6.3.2.1 LAN

In this page (Figure 6-3) you can get the network statistics of the LAN and Wireless LAN interface. Click "Reset Statistics" to clean up all network statistics.

Figure 6-3. Device Info – Statistics – LAN

6.3.2.1 WAN

In this page (Figure 6-4) you can get the network statistics of the WAN interface. Click "Reset Statistics" to clean up all network statistics.

Figure 6-4. Device Info – Statistics – WAN

6.3.3 Route

In this page you can get the IP route information of the device. (Figure 6-5)

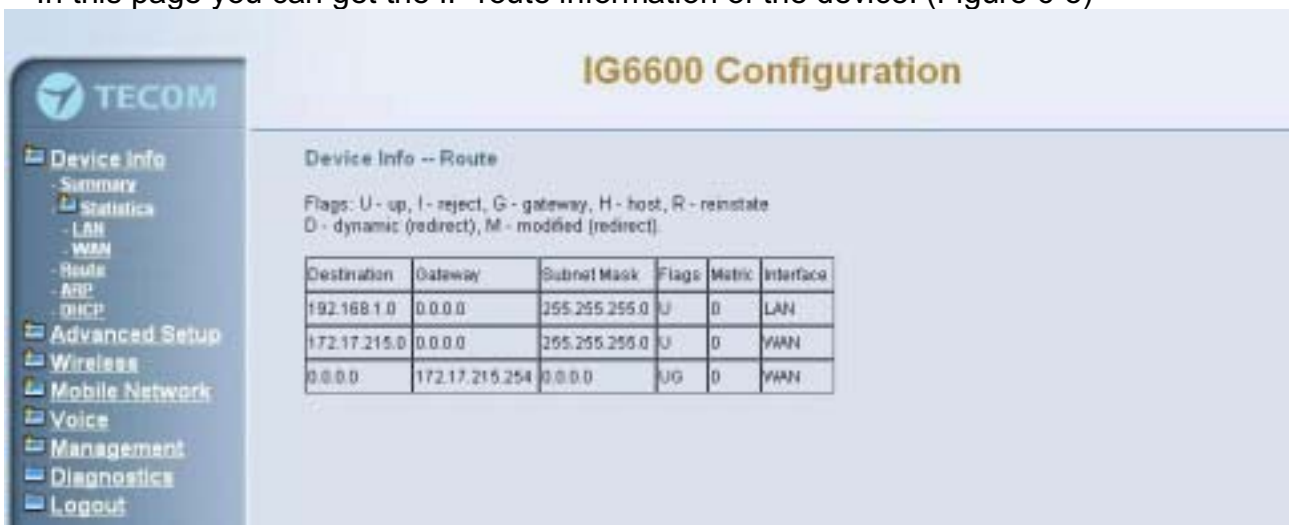


Figure 6-5. Device Info – Route

6.3.4 ARP

This page shows an ARP table which maps IP network addresses to hardware addresses used by data link level protocol. (Figure 6-6)

Figure 6-6. Device Info – ARP

6.3.5 DHCP

This page shows a DHCP Leases table which shows the all used IP address under IG6600's DHCP Server. (Figure 6-7)

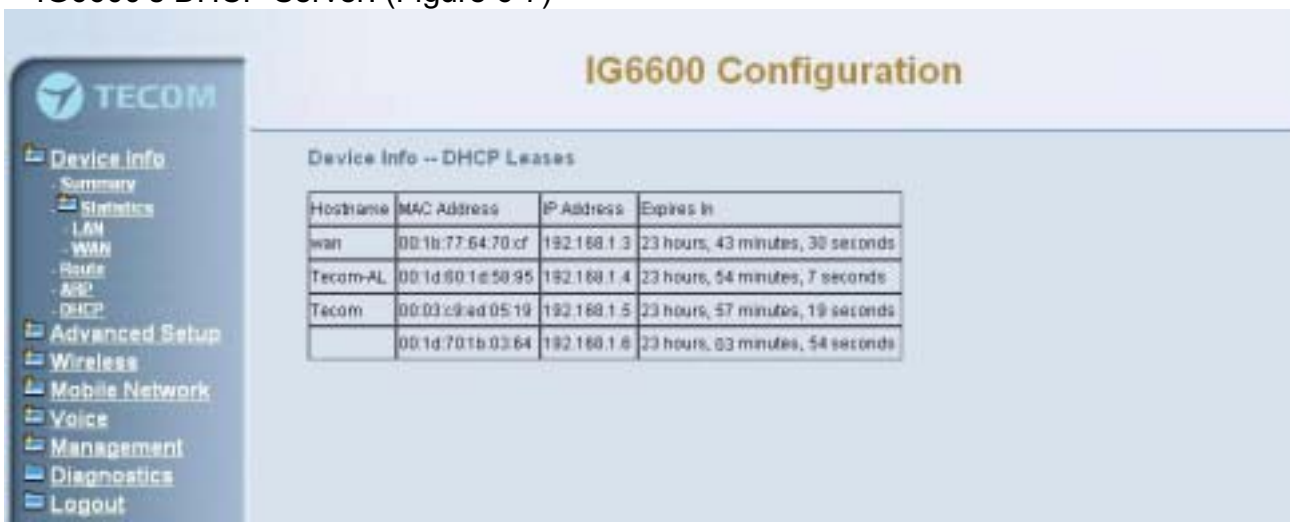


Figure 6-7. Device Info – DHCP

6.4 Advanced

Advanced Setup allows system administrator to configure the following topics:

- WAN
- LAN
- NAT
  - Virtual Servers
  - Port Triggering
  - DMZ Host
- Security
  - IP Filtering
    - Outgoing
    - Incoming
- Parental Control
  - Time Restriction
  - URL Filter
- Quality of Service
  - DSCP Marking
  - Bandwidth Control
- Routing
  - Static Route
- Dynamic DNS
- Upnp
- File Server
- Print Server

6.4.1 WAN

There are three modes that you can give WAN IP address to IG6600: Static IP mode, DHCP mode and PPPoE mode. You can also enable or disable Firewall.

Network Address Translation (NAT) allows you to share one public WAN IP address for multiple computers on your LAN side. In IG6600, NAT is default enabled and is not shown on the page to prevent it from being disabled.

This page shows the setting of WAN interface which is Static IP mode (Figure 6-8).

Figure 6-8. Advanced – WAN (Static IP Mode)

The Dynamic Host Configuration Protocol (DHCP) is an Internet protocol for automating the configuration of computers that use TCP/IP. DHCP can be used to automatically assign IP addresses, to deliver TCP/IP stack configuration parameters such as the subnet mask and default router, and to provide other configuration information.

This page shows the setting of WAN interface which is DHCP mode (Figure 6-9).

Figure 6-9. Advanced – WAN (DHCP Mode)

The Point-to-Point Protocol over Ethernet (PPPoE) requires a user name and password that your ISP has provided to you to establish your connection. This page shows the setting of WAN interface which is PPPoE mode (Figure 6-10).

Figure 6-10. Advanced – WAN (PPPoE Mode)

6.4.2 LAN

It allows you to set LAN IP and Subnet Mask for LAN interface. You can also enable or disable DHCP Server and configure related settings. The “Static IP Lease List” allows to program 32 entries to have the fixed IP address for the specified devices. If needed, it can also configure the second IP address and Subnet Mask for the LAN interface (Figure 6-11).

Figure 6-11. Advanced – LAN

6.4.3 NAT

It’s separated into three parts: Virtual Servers, Port Triggering, and DMZ Host.

6.4.3.1 Virtual Servers

Virtual Server allows you to direct incoming traffic from WAN side identified by Protocol and External port to the internal server with private IP address on the LAN side. The "Internal Port" can be modified if the "External Port" needs to be converted to a different port number used by the server on the LAN side. The remote IP should be specified in the table to allow the access. A maximum 32 entries can be configured. (Figure 6-12, Figure 6-13)

Figure 6-12. Advanced – NAT – Virtual Servers

Figure 6-13. Advanced – NAT – Virtual Servers – Add

6.4.3.2 Port Triggering

Some applications require that specific ports in the IG6600's firewall opened for access by the remote parties. Port Triggering dynamically opens up the "Open Ports" in the firewall when an application on the LAN initiates a TCP/UDP connection to a remote party using the "Trigger Ports". IG6600 allows the remote party from the WAN side to establish new connections back to the application on the LAN side using the "Open Ports". A maximum 32 entries can be configured. (Figure 6-14,Figure 6-15)

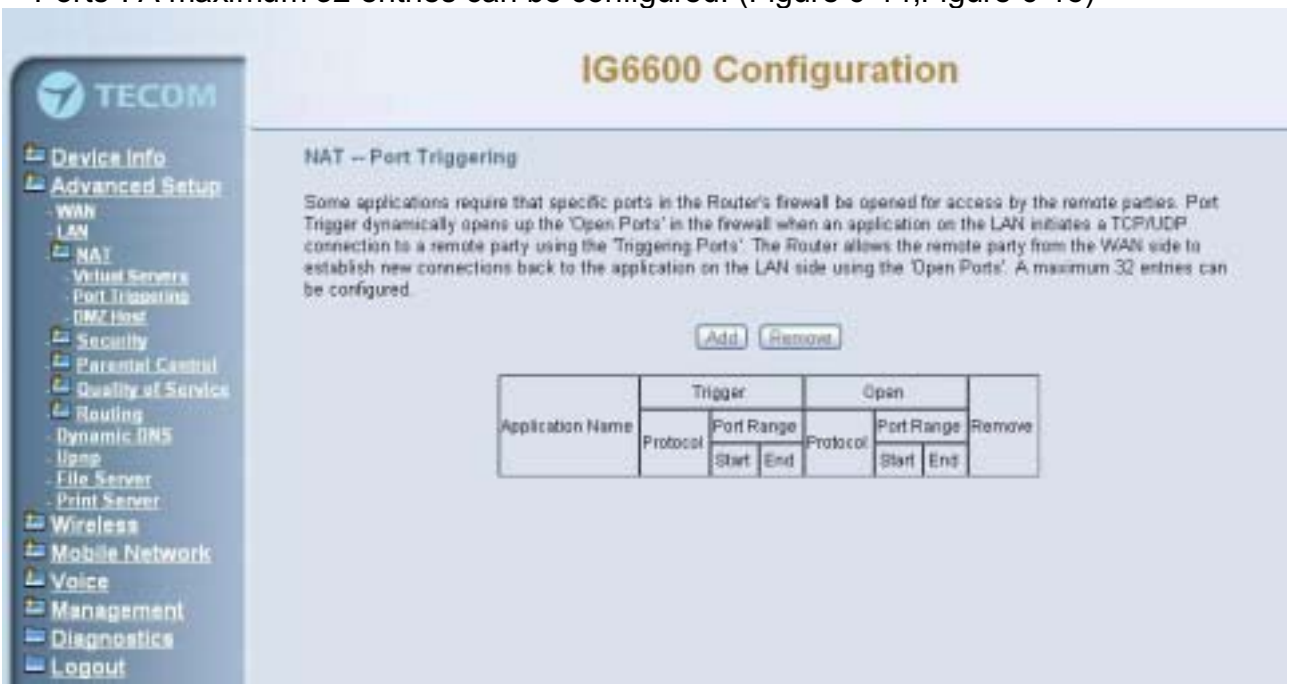


Figure 6-14. Advanced – NAT – Port Triggering

Figure 6-15. Advanced – NAT – Port Triggering – Add

6.4.3.3 DMZ Host

IG6600 will forward IP packets that do not belong to any of the applications configured in the Virtual Servers table to the DMZ host computer. Enter the computer's IP address and click "Save Settings" to activate the DMZ host. Clear the IP address field and click "Save Settings" to deactivate the DMZ host. (Figure 6-16)

Figure 6-16. Advanced – NAT – DMZ

6.4.4 Security

It supports IP Filtering Setup. It's separated into two parts: Outgoing and Incoming.

6.4.4.1 IP Filtering - Outgoing

It allows the administrator to create a filter rule to identify outgoing IP traffic by specifying a new filter name. At least one condition is needed. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. (Figure 6-17,Figure 6-18)

Figure 6-17. Advanced – Security – IP Filtering – Outgoing

Figure 6-18. Advanced – Security – IP Filtering – Outgoing – Add

6.4.4.2 IP Filtering - Incoming

It allows the administrator to create a filter rule to identify incoming IP traffic by specifying a new filter name. At least one condition is needed. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. (Figure 6-19, Figure 6-20)

By default, all incoming IP traffic from the WAN will be blocked if it is not consistent with the incoming filter rules. In fact, IG6600 has opened some necessary ports such as web port, sip port, and rtp port, to make sure that voice application can communicate well.

Figure 6-19. Advanced – Security – IP Filtering – Incoming

Figure 6-20. Advanced – Security – IP Filtering – Incoming – Add

6.4.5 Parental Control

It's separated into two parts: Time Restriction, and URL Filter.

6.4.5.1 Time Restriction

The administrator can add time restriction to a special LAN device connected to IG6600. The "Browser's MAC Address" automatically displays the MAC address of the LAN device where the browser is running. To restrict other LAN device, click the "Other MAC Address" button and enter the MAC address of the other LAN device. (Figure 6-21, Figure 6-22)

Figure 6-21. Advanced – Parental Control – Time Restriction

Figure 6-22. Advanced – Parental Control – Time Restriction – Add

6.4.5.1 URL Filter

The administrator can add 100 entries maximum to include/exclude the URL address and Port number. Choose “Include” means the user can only connect to the URL that you add. Choose “Exclude” means the user can not connect to the URL that you add. “Include” and “Exclude” are exclusive. The all entries are for the selected type. (Figure 6-23,Figure 6-24).

Figure 6-23. Advanced – Parental Control – URL Filter

Figure 6-24. Advanced – Parental Control – URL Filter – Add

6.4.6 Quality of Service

It's separated into two parts: DSCP Marking, and Bandwidth Control

6.4.6.1 DSCP Marking

IP QoS is applied to the traffic from LAN to WAN; the traffic from WAN to LAN will not be applied.(Figure 6-25)

If "Enable DSCP Mark" checkbox is selected, choose a default DSCP mark to automatically mark incoming traffic without reference to a particular classifier. Click "Save Settings" button to save it. Note: If "Enable DSCP Mark" checkbox is not selected, all QoS will be disabled for all interfaces. The default DSCP mark is used to mark all egress packets.

Figure 6-25. Advanced – Quality of Service – DSCP Marking

6.4.6.2 Bandwidth Control

Bandwidth Control allows you to control WAN port's upstream bandwidth according to your settings, and it can ensure the highest priority IP packet traffic throughput. By default, all voice packets have been queued in the highest IP packets, and the others

have been queued in the normal IP packets if they have not been set in the traffic class rule.

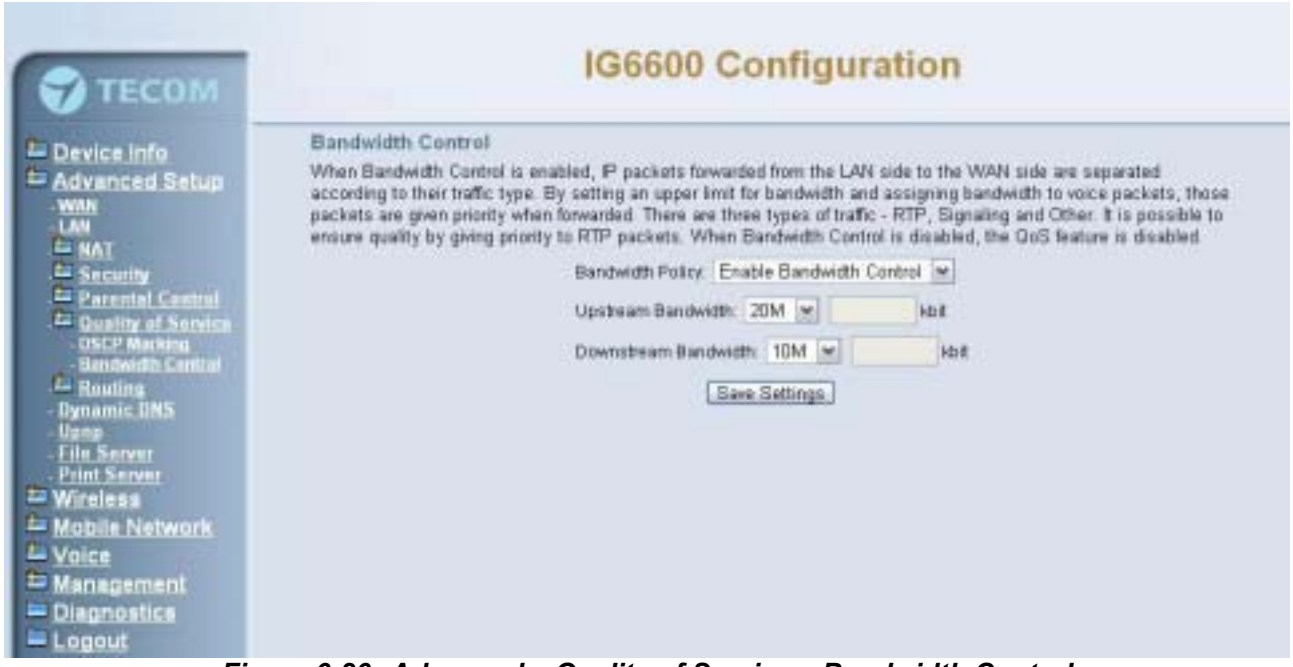


Figure 6-26. Advanced – Quality of Service – Bandwidth Control

6.4.7 Routing

6.4.7.1 Static Route

The Static Route allows you to add special routing rules into routing table.

Figure 6-27. Advanced – Route – Static Route

Click “Add” to create a new Static Route. Enter the destination network address, subnet mask, gateway AND/OR available WAN interface then click "Save Settings" to add the entry to the routing table. (Figure 6-27,Figure 6-28)

Figure 6-28. Advanced – Route – Static Route – Add

6.4.8 Dynamic DNS

The Dynamic DNS service allows you to alias a register domain name to a dynamic IP address. It allows IG6600 to be more easily accessed from various locations on the Internet. Click “Add” or “Remove” to configure Dynamic DNS. (Figure 6-29)

Figure 6-29. Advanced – Dynamic DNS

Now IG6600 support for two DDNS provider, DynDNS.org and TZO. Specify the register hostname and choose the related interface. Fill in the username/password or email/key and click “Apply/Save”. IG6600 will update the current IP with DDNS provider when click “Apply/Save” or system reboot successfully. IG6600 will also update the current IP automatically with DDNS provider in the programmed Update Cycle. (Figure 6-30,Figure 6-31)

Figure 6-30. Advanced – Dynamic DNS – DynDNS.org

Figure 6-31. Advanced – Dynamic DNS – TZO

6.4.9 Upnp

It's used to enable or disable the universal plug and play function. (Figure 6-32)

Figure 6-32. Advanced – Upnp

6.4.10 File Server

IG6600 provides file sharing service for various Microsoft Windows clients. Your USB mass storage can plug into the IG6600 USB port and can be accessed by Windows/Linux Network Neighborhood (Figure 6-33).

Note: Currently IG6600 only supports the USB Storage device with one partition, the device with multiple partitions may have problem to be recognized and used.

Figure 6-33. Advanced – File Server

Enter the service name and Workgroup. The “Workgroup” is the name of the group that shares the same resources on the local network. The workgroup name of windows system user must the same with the IG6600 workgroup. You can check your workgroup by the following step:

1. Open the Control Panel from the Start menu and click on the “System” icon.
2. Open the “System Properties” window.
3. Click the “Computer Name” tab. It will show details of the computer's description, name and workgroup.(Figure 6-34)

4. If workgroup name is different from IG6600 workgroup name, you can click “Change” to revise workgroup name of your computer or just change IG6600 workgroup name.(Figure 6-35)

Figure 6-34. Windows workgroup

Figure 6-35. Change windows system workgroup

User can use search function in windows to connect to IG6600 file server:

1. Click “Search” in the windows “Start menu”.
2. Click “Computers and People” and input IG6600 Service Name. Click “Search”. (Figure 6-36)
3. The window will show IG6600 file server icon. Click the icon. (Figure 6-36)
4. Enter the user name and password that you register in the IG6600 file server. Then you will see the sharing files of your account. (Figure 6-37)(Figure 6-38)

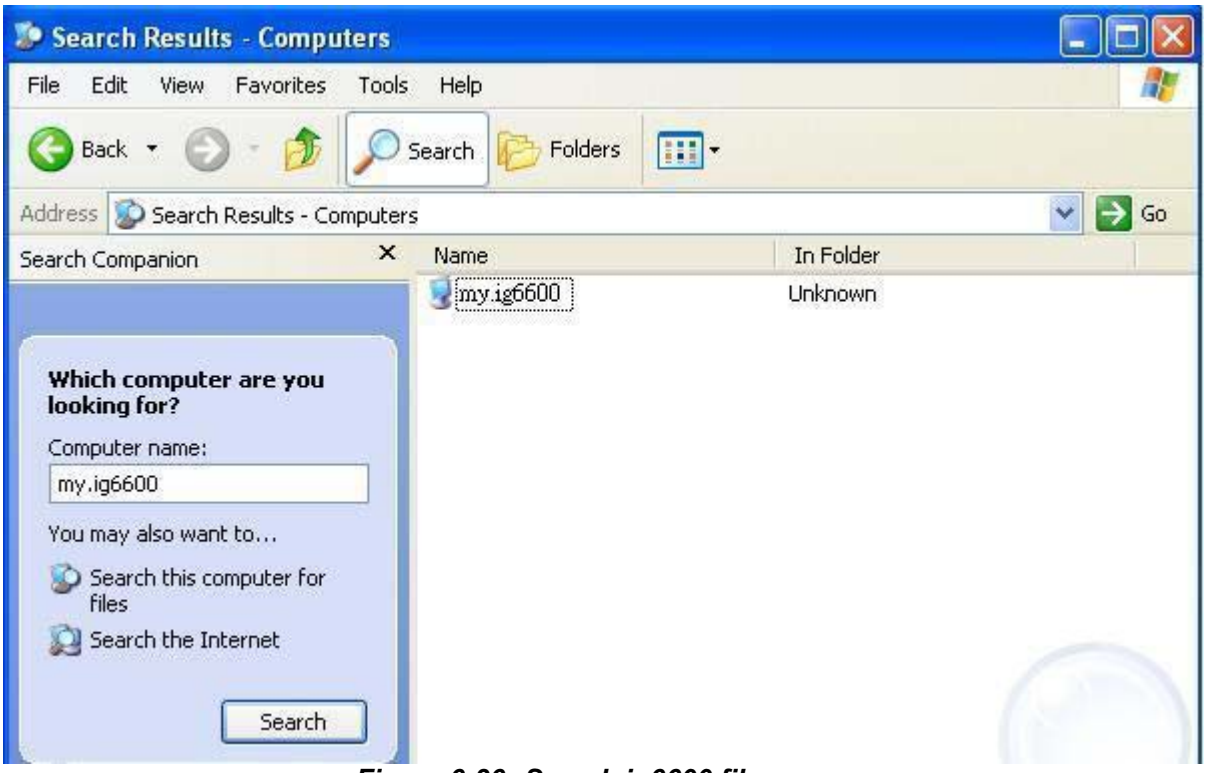


Figure 6-36. Search ig6600 file server

Figure 6-37. Input file server username and password

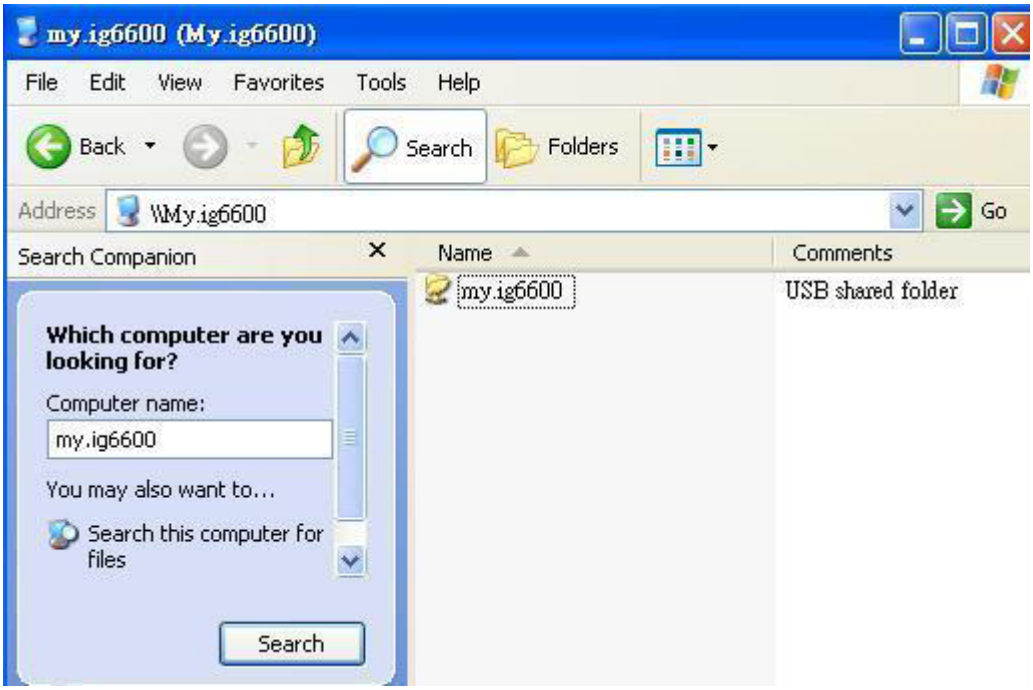


Figure 6-38. USB Sharing files

6.4.11 Print Server

IG6600 has a USB Interface. It allows connecting a USB printer. The page is to program the Printer setting. (Figure 6-39)

Figure 6-39. Advanced – Print Server

Enter the Printer name. The printer name will be used by user to access the printer. “Make and model” is the model name of the printer. User can access the USB printer by the following step:

1. Open the Printers and Faxes Window in windows system control panel.
2. Select the Add New Printer link. The add printer wizard window will be displayed.(Figure 6-40)
3. Select Next on the Add New Printer Wizard Screen. Select “A network printer, or a printer attached to another computer.” Then press the Next button.(Figure 6-41)

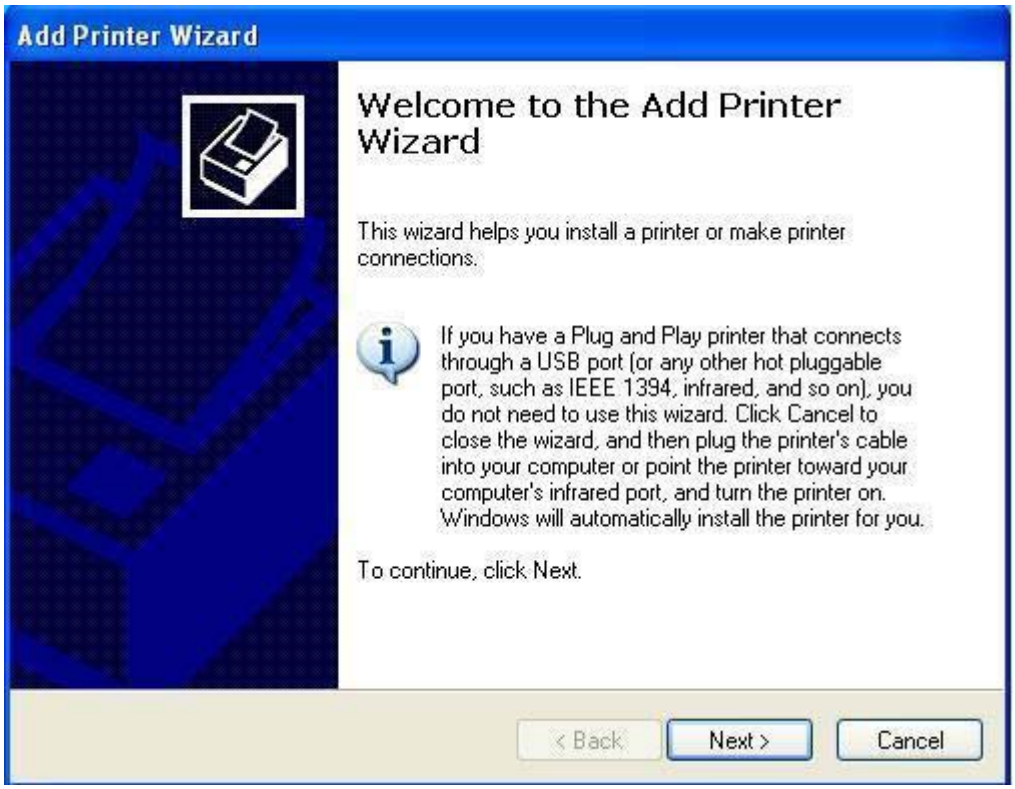


Figure 6-40. Add Printer Wizard

Figure 6-41. Local or Network Printer

4. Select “Connect to a printer on the Internet or on a home or office network” and Input the URL:”http://192.168.1.1/printers/tecom”. The 192.168.1.1 in the URL is your IG6600 LAN IP address. The “tecom” in the URL is the Printer name.(Figure 6-42)

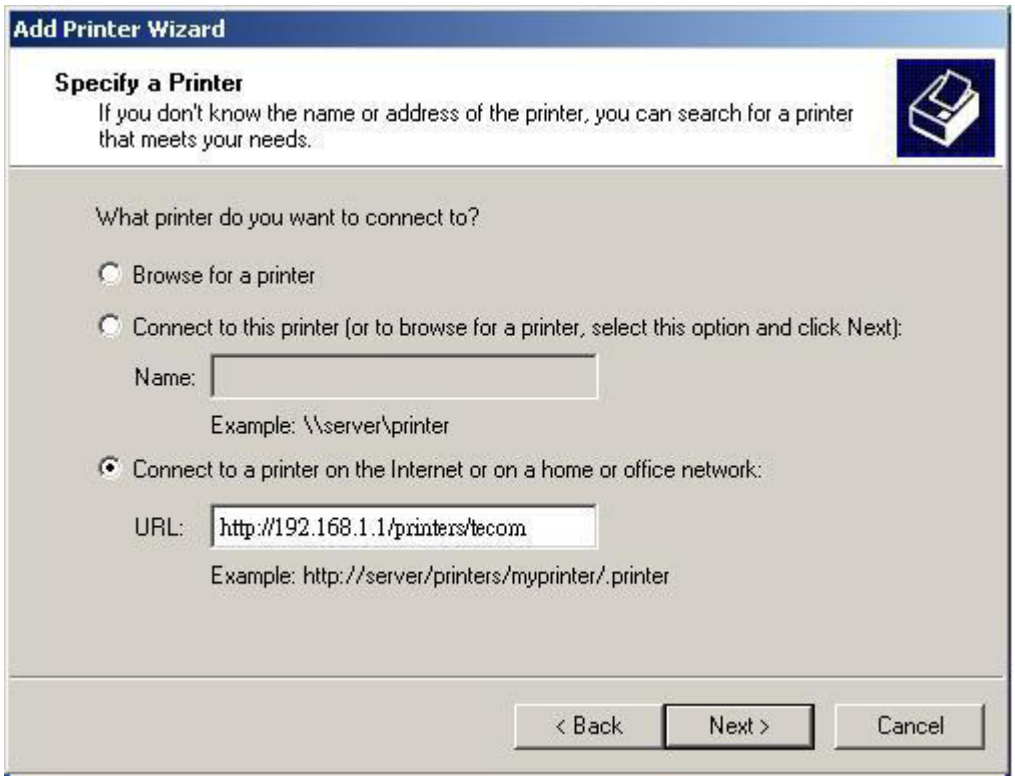


Figure 6-42. Specify a Printer

5. Select the Manufacturer and model of your printer. Press OK.(Figure 6-43)

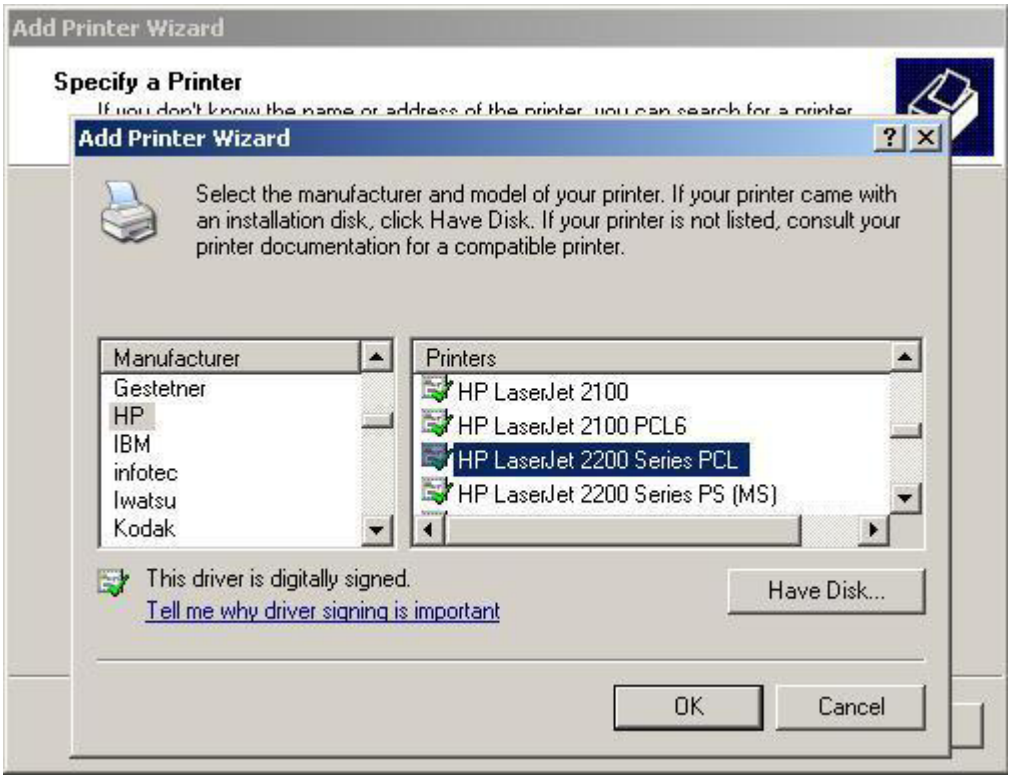


Figure 6-43. Select Printer Manufacturer and Model

6. The setup is completed.(Figure 6-44)

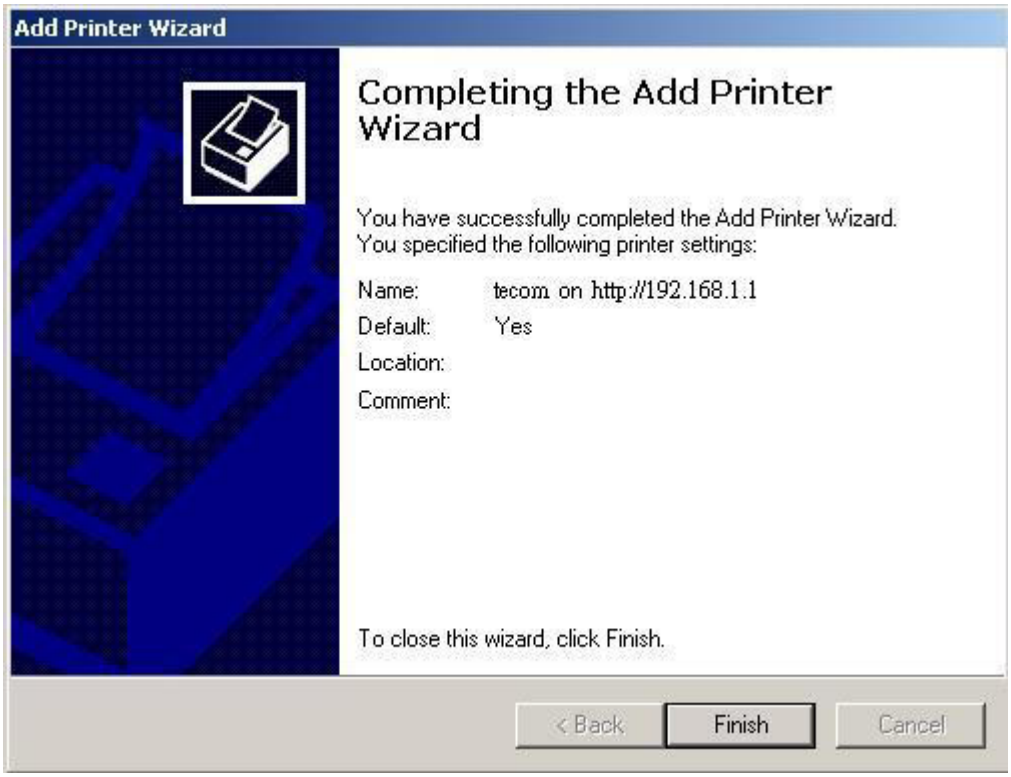


Figure 6-44. Completing the Add Printer Wizard

6.5 Wireless

Use the Wireless screen to configure the IG6600 for wireless access. It is separated into 7 parts:

- Basic
  - Primary
  - Additional
- Security
- MAC Filter
- Wireless Bridge
- Advanced
- Station Info
- Power Saving

The configurable items for each part would be described in the following.

6.5.1 Basic

It's separated into two parts: Primary, and Additional.

6.5.1.1 Primary

This page allows you to configure the basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scans, active the client isolation, disable WMM advertise and enable wireless multicast forwarding.

User can set the wireless network name (also known as SSID) and restrict the channel set based on country requirements. The max clients are 16. (Figure 6-45)

Figure 6-45. Wireless – Basic – Primary

6.5.1.1 Additional

IG6600 supports to configure 3 additional Wireless networks. Each SSID can have different name and configurations. (Figure 6-46)

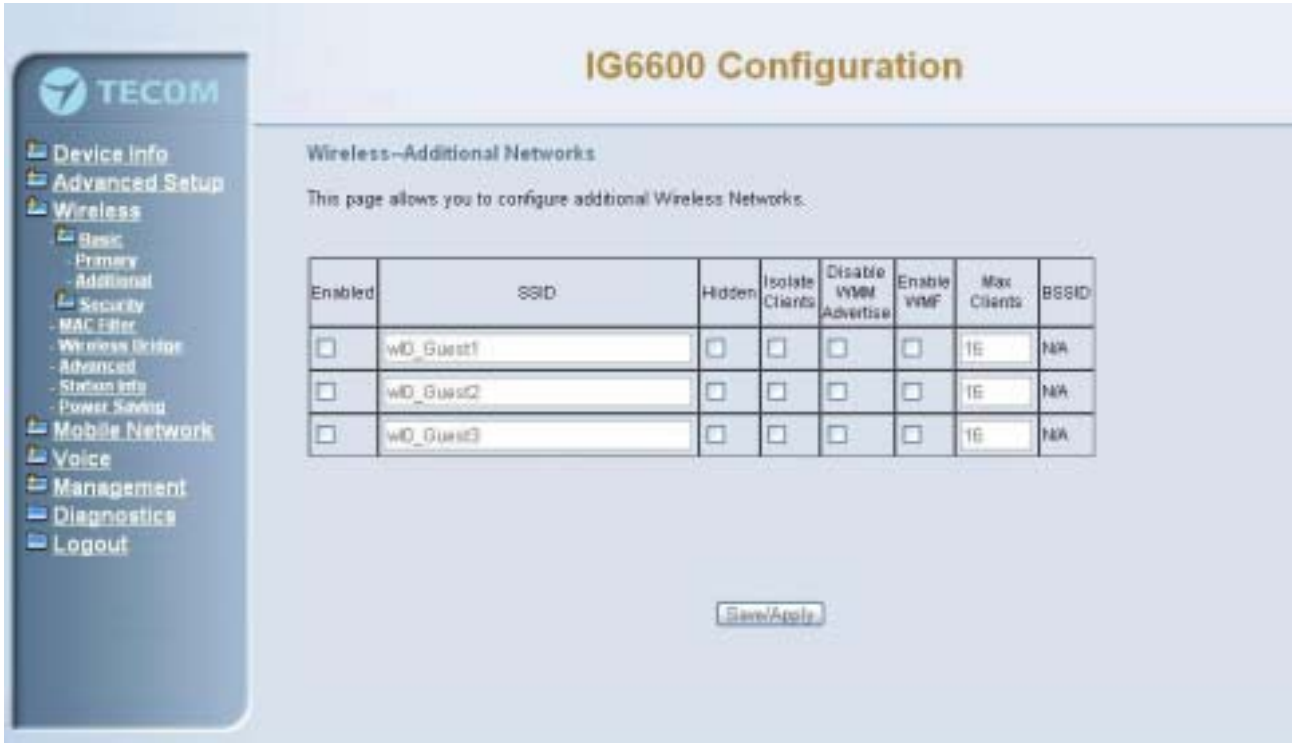


Figure 6-46. Wireless – Basic – Additional

6.5.2 Security

This page allows you to configure security features of the wireless LAN interface. It allows you to select your Security Mode: Manual and WPS.

In WPS mode, it follows the Wi-Fi Protected Setup standard for easy and secure wireless network set up and connection. User can use Push-Button or PIN to configure the connection with IG6600. In Push-Button method, IG6600 and client must press the WPS button to establish connection. In PIN mode, when the Access Point Pin is used, client can input the PIN to establish the connection. When the External Device PIN is used, client device PIN can be entered in the field to establish connection (Figure 6-47).

Figure 6-47. Wireless – Basic – Additional

In Manual mode, you can set the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength. Click "Apply/Save" to configure the wireless security options. (Figure 6-48,Figure 6-49)

The following items will be configured in the page:

Network Authentication: Set the network Authentication method. Open and Shared can use the WEP Encryption. 802.1X and WPA require setting valid RADIUS parameters. WPA-PSK requires a valid WPA Pre-Shared Key to be set.

802.1X: As the IEEE standard for access control for wireless and wired LANs, 802.1x provides a means of authentication and authorizing devices to attach to a LAN port. This standard defines the Extensible Authentication Protocol (EAP), which uses a central authentication server to authenticate each user on the network.

WPA/WPA2: The Wi-Fi Alliance put together WPA/WPA2 as a data encryption method for 802.11 wireless LANs. WPA is an industry-supported, pre-standard version of 802.11i utilizing the Tempoal Key Integrity Protocol (TKIP), which fixes the problems of WEP, including using dynamic keys.

WPA/WPA2 Pre-Shared Key: Set the WPA/WPA2 Pre-Shared Key (PSK).

WPA/WPA2 Group Rekey Interval: Set the WPA/WPA2 Group Rekey Interval in seconds. Leave blank or set to zero to disable periodic re-keying.

Figure 6-48. Wireless – Security – 1

Figure 6-49. Wireless – Security – 2

Radius Server: Set the IP address of the RADIUS server to use for authentication and dynamic key derivation.

RADIUS Server is responsible for receiving user connection requests, authenticating the user, and then returning all of the configuration information necessary for the client to deliver the server to the user.

Radius Port: Sets the UDP port number of the RADIUS server. The port number is usually 1812 or 1645 and depends on the server.

Radius Key: Set the shared secret for the RADIUS connection.

WEP Encryption: Selecting Disabled disables WEP data encryption. Selecting Enabled enables WEP data encryption and requires that a valid network key be set and selected unless 802.1X is enabled.

WEP, short for Wired Equivalent Privacy, is a protocol for wireless LANs or local area networks. This WEP is defined in the 802.11 Standard. WEP is designed so security levels are maintained at the same level as the wired LAN. WEP's aim is to provide security by encrypting data over radio waves. WEP protects data as it's transmitted from one end point to another. WEP is used at two lowest layers, the data link and physical layer. WEP is designed to make up for the inherent security in wireless transmission as compared to wired transmission.

Network Key: Set whether shared key authentication is required to associate. A valid network key must be set and selected if required.

6.5.3 MAC Filter

Figure 6-50. Wireless – MAC Filter

This page allows users to Add/Remove hosts with the specified MAC addresses that are able or unable to access the wireless network. When users decide to use Allow, only the MAC addressed in the user-defined list can access the wireless network. When users use Deny, only the user specified MAC addresses are unable to access to wireless network. And if the Disable option is selected, all users will be able to access to wireless network.

Note: The MAC addresses in the list would immediately take effect when Allow or Deny is checked. (Figure 6-50,Figure 6-51)

Figure 6-51. Wireless – MAC Filter – Allow/Deny

6.5.4 Wireless Bridge

This page allows you to configure wireless bridge features of the wireless LAN interface. You can select Wireless Bridge (also known as Wireless Distribution System) to connect to other wireless bridge device, but the access point functionality will be disabled. Selecting Access Point enables access point functionality. Wireless bridge functionality will still be available and wireless stations will be able to associate to the AP. Select Disabled in Bridge Restrict which disables wireless bridge restriction. Any wireless

bridge will be granted access. Selecting Enabled or Enabled (Scan) enables wireless bridge restriction. Only those bridges selected in Remote Bridges will be granted access. Click "Refresh" to update the remote bridges. Wait for few seconds to update. Click "Save Settings" to configure the wireless bridge options. (Figure 6-52)

Figure 6-52. Wireless – Wireless Bridge

6.5.5 Advanced

It allows you to configure advanced features of the wireless LAN interface. You can select a particular channel on which to operate, force the transmission rate to a particular speed, set the fragmentation threshold, set the RTS threshold, set the wakeup interval for clients in power-save mode, set the beacon interval for the access point, set XPress mode and set whether short or long preambles are used. Click "Save Settings" to configure the advanced wireless options. (Figure 6-53,Figure 6-54)

Band: Default setting is 2.4GHz.

Channel: Select the appropriate channel from the list provided to correspond with your network settings. All devices in your wireless network must use the same channel in order to function correctly.

Auto Channel Timer: The IG6600 should search for the best wireless channel in this period (minute).

802.11n/EWC: Automatic or disable 802.11n support.

Bandwidth: 20MHz/40MHz in 2.4G band.

Control Sideband: Specify if the extension channel should be in the “Upper” or “Lower**”** sideband.

802.11n Rate: Set the Physical Layer rate. These rates are only applicable when the”802.11n/EWC” is configured as “Auto”.

802.11n Protection: In “Auto” mode, the wireless devices use RTS/CTS to improve 802.11n performance in mixed 802.11g/802.11b networks. Turn protection off to

maximize 802.11n throughput under most conditions. Do not disable 802.11n protection if there is a possibility that 802.11b or 802.11g devices will use your wireless network.

Support 802.11n Client Only: "On" enables support for 802.11n clients only. Off will enable support for clients that are not 802.11n.

54g® Rate: The default setting is Auto. The range is from 1 to 54Mbps. The rate of data transmission should be set depending on the speed of your wireless network. You can select from one transmission speed, or keep the default setting, Auto, to have the IAD automatically use the fastest possible data rate.

Multicast Rate: The default setting is 54Mbps. The range is from 1 to 54Mbps. The rate of data transmission should be set depending on the speed of your wireless network. You can select from one transmission speed, or keep the default setting, to have the IAD automatically use the fastest data rate for multicast packets.

Basic Rate: Select the basic rate that wireless clients must support.

Fragmentation Threshold: This value should remain at its default setting of 2346. The range is 256~2346 bytes. It specifies the maximum size for a packet before data is fragmented into multiple packets. If you experience a high packet error rate, you may slightly increase the Fragmentation Threshold. Setting this value too low may result in poor network performance. Only minor modifications of this value are recommended.

Figure 6-53. Wireless – Advanced – 1

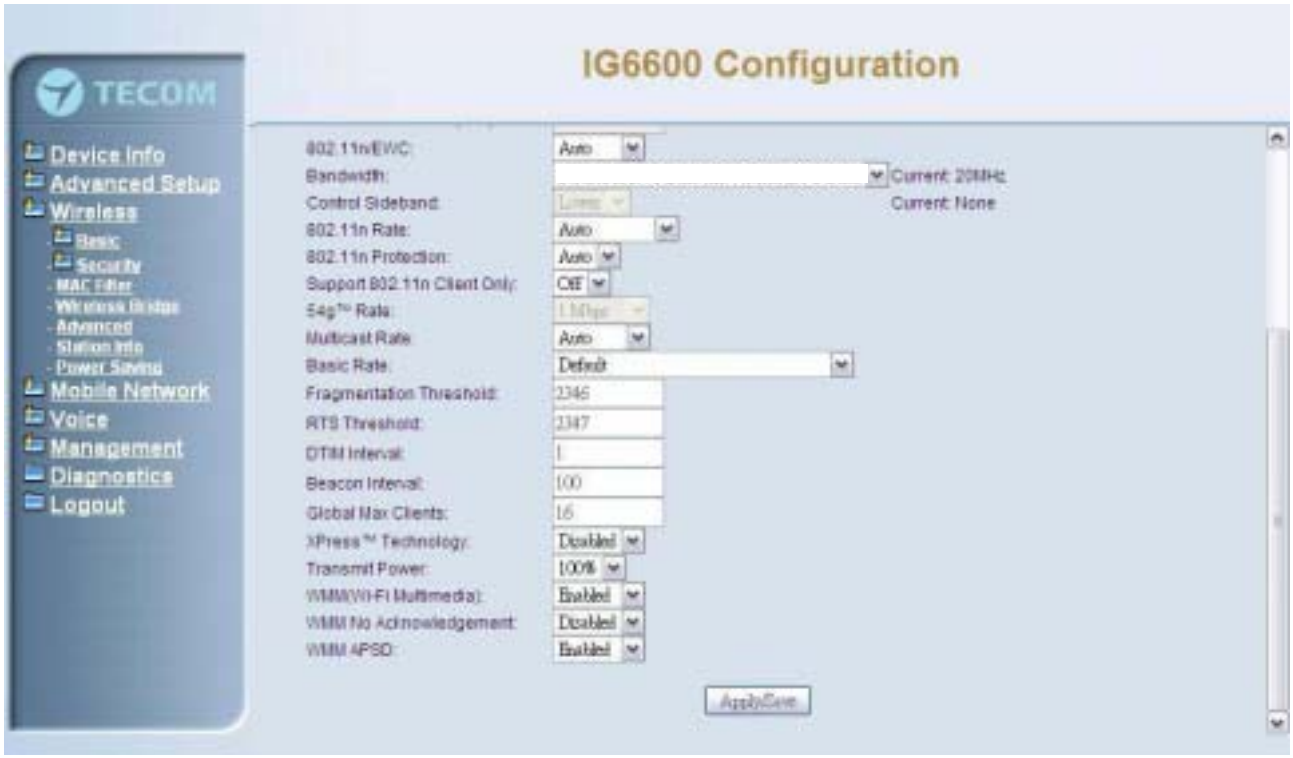


Figure 6-54. Wireless – Advanced – 2

RTS Threshold: This value should remain at its default setting of 2347. The range is 0~2347 bytes. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the packet RTS threshold size, the RTS/CTS mechanism will not be enabled. The IAD sends Request of Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission.

DTIM Interval: The default value is 3. This value, between 1 and 255 milliseconds, indicates the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the router has buffered broadcast or multicast for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and awaken to receive the broadcast and multicast message.

Beacon Interval: The default value is 100. Enter a value between 1 and 65535 milliseconds. The Beacon Interval value indicates the frequency interval of the beacon. A beacon is a packet broadcast by the router to synchronize the wireless network.

Global Max Clients: Maximum number of wireless clients.

XPress™ Technology: Select “Enable” to improve the wireless performance. It is a technology that utilizes standards based on framebursting to achieve higher throughput.

Transmit Power: User can set the transmit power as 20%, 40%, 60%, 80% and 100%

WMM (Wi-Fi Multimedia): Feature that improves the experience for audio, video and voice applications over a Wi-Fi network.

WMM No Acknowledgement: When the “WMM No Acknowledgement" is enabled, the receiver will not acknowledge received packets during wireless packet transmit. It is suitable in the environment where communication quality is good and interference is weak. It can improve transmission efficiency.

WMM APSD: WMM Automatic Power Save Delivery. APSD is useful for VoIP phone to achieve low power consumption.

6.5.6 Station Info

Authenticated wireless stations and their status will be shown here. (Figure 6-55)

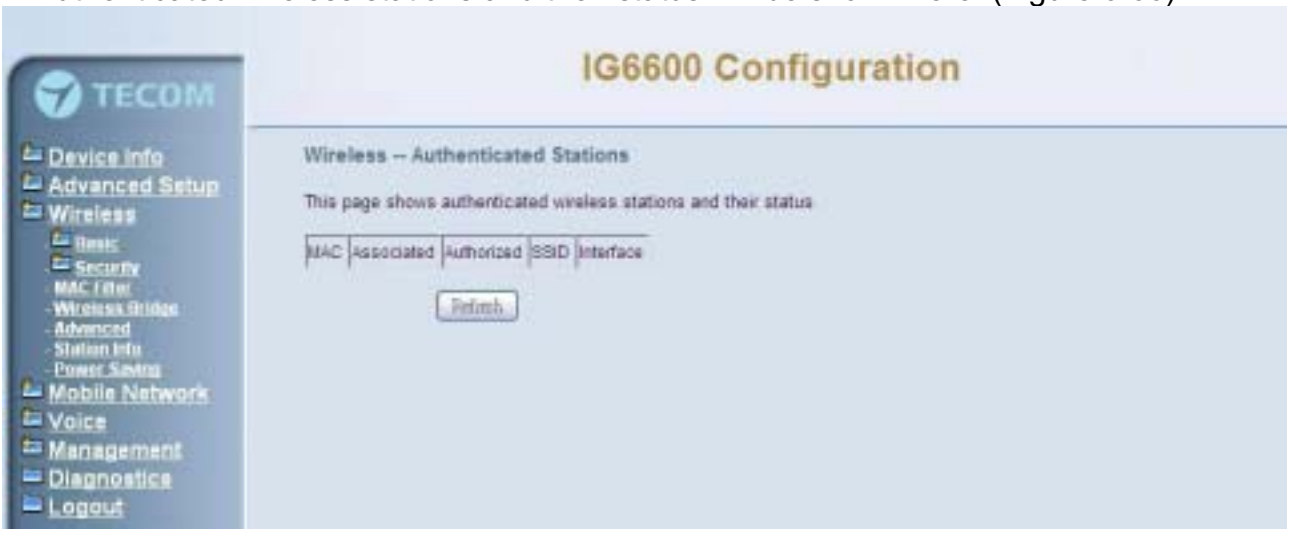


Figure 6-55. Wireless – Station Info

6.5.7 Power Saving

The Power Saving Features provide the ability to turn off specific interfaces at specific times. (Figure 6-56)

Figure 6-56. Wireless – Power Saving

6.6 Mobile Network

The IG6600 provides the WAN failover feature which allows gateway to reroute the traffic to the 3G WAN interface when main Ethernet WAN interface is down. Once the main Ethernet WAN is back, the traffic will fall back to Ethernet WAN.

6.6.1 3G Device

The following HSPA setting can be bound to the special HSPA stick, If you want so please select the HSPA stick in device list. User can select prefer Network Access Type and service operator. If your SIM Card has PIN lock, the PIN Code form allows user to enter the PIN code. (Figure 6.57)

Figure 6-57. Mobile – 3G Device

6.6.2 3G Credential Settings

Before establish the 3G backup, user need to configure the mobile network connection settings which provide by your service provider.

- Dial Number: The dial number is provided by your service subscriber. Please check with your subscriber.
- Access Point Name: The APN (Access Point Name) is the name used to identify packet service in the 3G/2G mobile network. The APN defines the type of service that is provided in the packet data connection.
- Username/Password: User can enter the username/password here.
- Authentication: The network connection authentication.

Figure 6-58. Mobile – 3G Credential

6.6.3 3G Connection Setting

User can configure the connection preference that Include connection usage, MTU Size, DNS Server.

Figure 6-59. Mobile – 3G Connction

6.6.4 3G configuration

Here allows user to setup the 3G WAN interface back up configuration. The instant activation will switch back to main WAN interface when it is available. The WAN interface fail test mode can be WAN interface status or PING responses of DGW and DNS.

Figure 6-60. Mobile – 3G Configuration

6.7 Voice

Use the Voice screen to configure the IG6600's voice related parameters. It allows system administrator to configure the following topics:

- Phone
  - Phone Extension
  - Extension Linekey
- Trunk
  - IP Trunk
  - Trunk Group
  - Answering Position
  - Call Routing
  - Call Restriction
  - Emergency Numbers
- System
  - Numbering Plan
  - Service Mode
  - Transmission
  - IGW Group
  - SMDR
  - ICD Call Log
- Voicemail
  - General
  - Extension
  - Holiday
  - Advanced
- Registered Phone

The configurable items for each part would be described in the following.

6.7.1 Phone

Use the Phone screen to configure IG6600's phone extension authentication and configure the default linekey setting.

6.7.1.1 Phone Extension

The IG6600 combines Proxy and Register servers in its application. All phones registered to the internal Register server are set here. (Figure 6-61,Figure 6-62)

Figure 6-61. Voice – Phone – Phone Extension – 1

Figure 6-62. Voice – Phone – Phone Extension – 2

SIP Authentication: It provides 24 IP phones to register.

Phone Number: The phone number is a station number. If it conflicts with the setting in Numbering Plan, it fails to add or make the change. Its value range is limited by Start Extension Number and End Extension Number settings in Numbering Plan page.

Password: The user password of this phone. The length is up to 24 digits or characters. It's used for Digest Authentication.

Day COS: The field assigns Class of Service for day mode operation. Acceptable values are 0-7. At default, all extensions are unrestricted.

Night COS: The field assigns Class of Service for night mode operation. Acceptable values are 0-7. At default, all extensions are unrestricted.

FXS Phone: It shows the FXS phone number. It's programmed in Numbering Plan.

Display Name: The FXS user's Calling Name.

Registration Configuration:

Minimal Expire: Minimal registered period of IP phone.

SIP Port: The IG6600 listens for requests on the SIP port. This port is used for UDP application and 5060 is its recommended value.

6.7.1.2 Extension Linekey

This page allows you to configure the default settings for IP phone's linekeys. While a new-allocated IP phone is registering to IG6600, IG6600 will send these settings to the phone. You can select Extension, Trunk, Call Park, Feature key and Others to these linekey. (Figure 6-63) (Figure 6-64)

It has 28 Line Keys to be configured. The Line Keys 5-28 can be applied to IP2061's EDM.

Auto Hold: When you are using a line and press the other linekey, IG6600 can hold the original line. Select "Enable" to open this function.

Figure 6-63. Voice – Phone – Extension Linekey-1

Figure 6-64. Voice – Phone – Extension Linekey-2

6.7.2 Trunk

Use the Trunk screen to configure the PSTN/IP Trunk function related parameters. It is separated into 6 parts:

- IP Trunk
- Trunk Group
- Answering Position
- Call Routing
- Call Restriction
- Emergency Numbers

6.7.2.1 IP Trunk

This page allows you to configure the Proxy and Register server of IP Trunk, up to 8 lines of IP Trunk are supported. (Figure 6-65,Figure 6-66,Figure 6-67)

Figure 6-65. Voice – Trunk – IP Trunk – 1

Figure 6-66. Voice – Trunk – IP Trunk – 2

Figure 6-67. Voice – Trunk – IP Trunk – 3

Subscriber Information:

Phone Number: It's the assigned phone number from uplink server.

Auth ID: The Account ID of registration to uplink server. It's used for Digest Authentication.

Auth Password: The Password of registration to uplink server. It's used for Digest Authentication.

SIP Proxy: The position of uplink SIP proxy server. IP address and domain name are all supported.

SIP Proxy Port: The SIP signal port of uplink registrar server.

Outbound Proxy: The address of uplink outbound proxy server. All sip request packet will be sent to this server that will determine their next hops.

Outbound Proxy Port: The SIP signal port of uplink outbound proxy server.

Register Proxy: The position of uplink register server. IP address and domain name are all supported.

Register Proxy Port: The SIP signal port of uplink registrar server.

Outbound Registrar: The address of uplink outbound Registrar server. All REGISTER packets will be sent to this server that will determine their next hops.

Outbound Proxy Port: The SIP signal port of uplink outbound registrar server.

Register Expires: It's the time for IG6600 sends REGISTER to uplink register server. It counts based on second.

Outgoing Caller ID: It's used as the Caller ID for the outgoing calls.

Registration: If "Registration" is No, the IP Trunk will not send REGISTER to the Register Proxy.

Support E.164: If "Support E.164" is Yes, the IP Trunk follows E.164 format to send to outgoing phone number.

Support DID: If "Support DID" is Yes, the IP Trunk is used in DID operation.

DID Table:

The table offers its individual phone number for each extension

DID Number: It's the assigned phone number from uplink server.

Outgoing Call ID: It's the assigned Caller ID number from uplink server.

Extension Number: the specified extension for the individual phone number.

Display Name: the specified extension user name for the individual number.

Local Port:

Local SIP Port for IP Trunk: SIP control signal packet Port of IP Trunk Client.

Local RTP Port for IP Trunk: Real-Time Protocol packet Port of IP Trunk Client. It's the start RTP port address for these IP Trunks.

End Dial:

If "Support End Dial on #" is Yes, outgoing number from IP trunk will be sent out immediately after pressing pound key (#).

Interdigit Timeout:

If there is no any dialed number after the setting time, the number will be sent out immediately. Its range is form 2 to 9 seconds.

Pause Time:

Session Timeout:

It means the longest communication time for IP trunks, zero means no restriction.

RPort:

When client is behind a NAT, the rport and received filed can allow SIP proxy to append the public IP address and port of NAT and transfer SIP message correctly. Choose "Enable" to use this function.

DTMF Type:

In IG6600, there are two methods for transmitting DTMF tone. Select RFC2833 Method, the DTMF tone will be transmitted by event packet. Select SIP-INFO Method, the DTMF tone will be represent in SIP INFO Message.

6.7.2.2 Trunk Group

This page allows you to configure the virtual Trunk Group, up to 4 Trunk Groups are supported. (Figure 6-68,Figure 6-69)

Trunk Group & Label:

This item allows you to assign physical Trunk to virtual Trunk Group. And you can configure your personal string as incoming Caller ID number. For six PSTN lines and eight IP lines you can choose from Group1 to Group 4.

Ring Type:

It can identify the trunk line and the trunk group to which it belongs to.

Trunk Group Priority:

This Item allows you to define 4 Trunk Group's interior priority. For four groups you can choose IP first or PSTN first. This will take effect if call routing entry's destination has been set as Group choice.

Figure 6-68. Voice – Trunk – Trunk Group – 1

Figure 6-69. Voice – Trunk – Trunk Group – 2

6.7.2.3 Answering Position

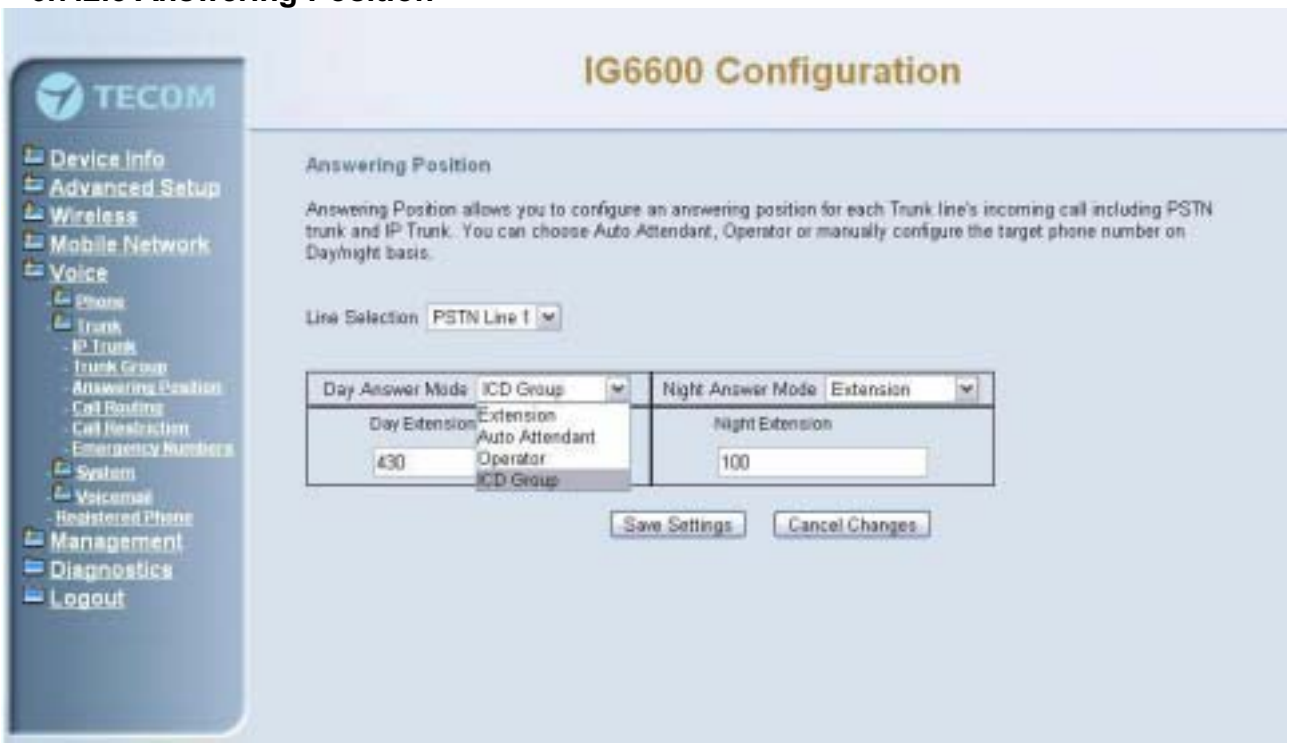


Figure 6-70. Voice – Trunk – Answering Positions

This page allows you to configure an answering position for each Trunk line's incoming call including PSTN trunk and IP Trunk. You can choose Auto Attendant, Operator, ICD Group or manually configure the target extension phone number on Day/night basis. (Figure 6-70)

Choose Auto Attendant, an idle VAA will auto-answer this incoming trunk call.

Choose Extension, you must configure the target phone number on Day/Night basis.

Choose ICD Group, you can configure an ICD group. The maximum phones for one ICD group are 25.

Choose Operator, the incoming trunk call will be redirected to Operator.

6.7.2.4 Call Routing

This page allows you to configure the call routing table. Each item is a routing rule for outgoing call. From/To define the number range, Min/Max define the match length, Del/Insert can change the target number, Destination to define the outbound call interface.

In the Destination field, the drop list includes a particular option: “IGW Group”. When selecting “IGW Group”, the next field “I” contains the founded IG6600’s name which is maintained by the IGW group, and you can select a suitable IG6600 to route your calls. (Figure 6-71)

Figure 6-71. Voice – Trunk – Call Routing Table

6.7.2.5 Call Restriction

This page allows you to configure the call restriction table. If the caller's COS priority is higher than the entry's COS value, the call is allowed. (Figure 6-72)

The allowed intervals are made up of “From” and “To” entry which establish a numeric range. For example, an entry of “From 1700”, “To 1800” would include the following

range of numbers as the leading: 1700, 1701, 1702, …, 1799, 1800. Each From/To entry can be from 1 to 13 digits long and may contain any digit 0-9. The “From” entry must be less than or equal to the “To” entry.

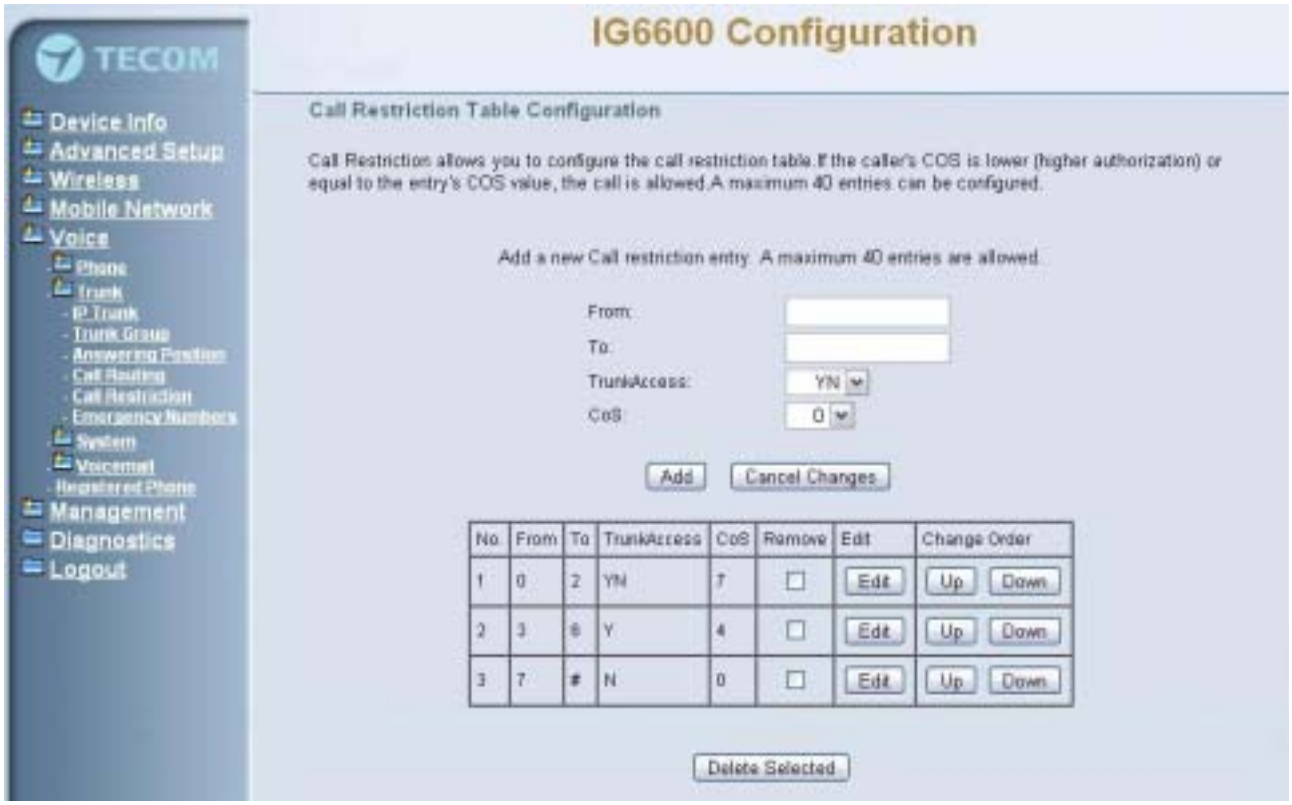


Figure 6-72. Voice – Trunk – Call Restriction

If the TrunkAccess value is set to Y, the call will follow the restriction setting only when seizing line and make a call. If the TrunkAccess value is set to N, the call will follow the restriction only when dialing a number directly. If the TrunkAccess value is set to YN, it’s suitable for both operations.

6.7.2.6 Emergency Numbers

When they dial a pre-configured emergency number, any user can make an emergency call regardless of call routing table, call restriction, and station lock. Notice: The numbers of emergency dial must not collide with the numbers in Numbering Plan.

This page allows you configure five emergency call numbers and lines with which emergency calls are sent out. (Figure 6-73)

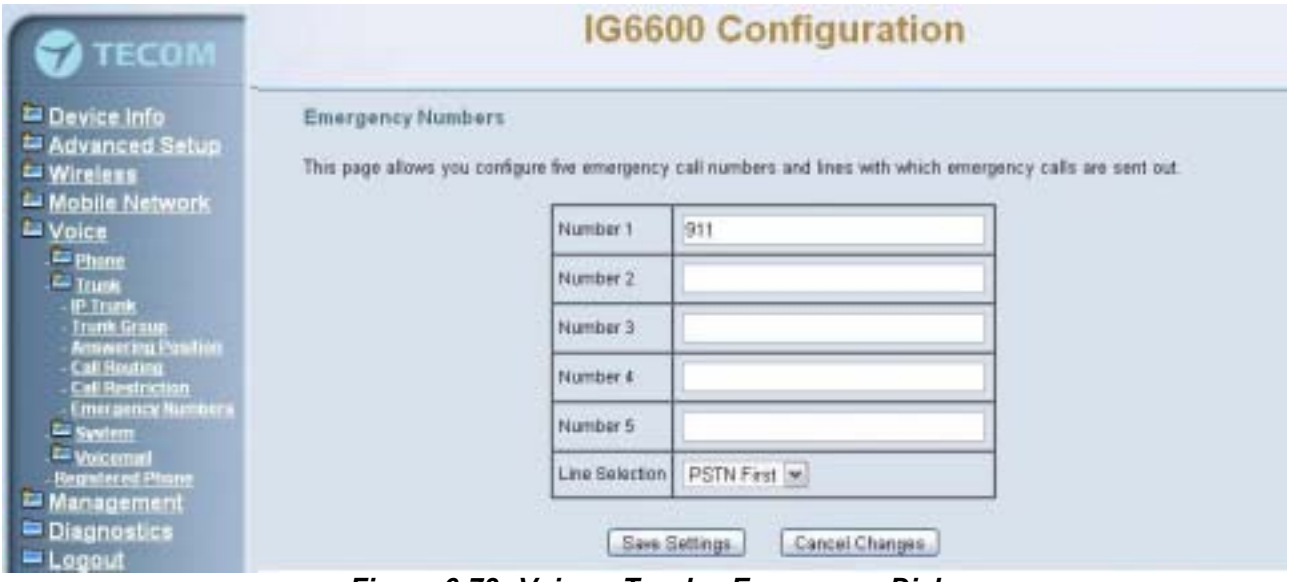


Figure 6-73. Voice – Trunk – Emergency Dial

6.7.3 System

Use the System screen to configure the System function related parameters. It is separated into 6 parts:

- Numbering Plan
- Service Mode
- Transmission
- IGW Group
- SMDR
- ICD Call Log

6.7.3.1 Numbering Plan

Figure 6-74. Voice – System – Numbering Plan

This page allows you to configure extension number range. You can also define some special service numbers in the table. (Figure 6-74)

Start extension: It's the start phone number of system internal extension. All valid extension number can't be smaller than it.

End extension: It's the end phone number of system internal extension. All valid extension number can't be greater than it. If receiving an IP20xx's Plug & Play request, IG6600 will allocate the first unused number from this limited region.

FXS Phone Number: It determines the FXS phone number.

Operator speed-dial number: If dial this number, the operator extension will be called. The length is limited on 1 character.

When you press the "Configuration" button, the operator-related settings can be configured: (Figure 6-75)

Figure 6-75. Voice – System – Numbering Plan – Operator Configuration

Operator day: It's the system operator number during day. If dial Operator speed-dial number, this extension will be called during day.

Operator Night: It's the system operator number during night. If dial Operator speed-dial number, this extension will be called during night.

Alternate Operator day: When the Operator during day does not answer a call, the call will be rerouted to alternate operator during day.

Alternate Operator night: When the Operator during night does not answer a call, the call will be rerouted to alternate operator during night.

Reroute Time: Set the length of operator no answer time to reroute to alternate operator. The time is applied to the call for alternate operator also. If alternate operator doesn't answer the call in the Reroute time, the call is reroute to Operator's Voice Mail box. "Unlimited" means it keeps ringing to the operator.

Voice mail service number: If dial this number, internal user can enter IG6600's voicemail system and do some operations such as listening personal message.

Start PSTN Line number: IG6600 provides 6 PSTN lines at most. Every line has its own internal alias number. You can dial these numbers directly to access PSTN trunks.

Start IP Trunk number: IG6600 provides 8 IP Trunk lines at most. Every line has its own internal alias number. You can dial these numbers directly to access IP Trunks.

Start Trunk Group number: IG6600 provides 4 trunk groups at most. If dialing trunk group number, IG6600 will choose the first idle line for caller automatically.

All Paging number: If dialing this number, all internal IP20xx will be paged. It can select the range of the paged extensions. If it's LAN, it pages the IP20xx on IG6600's LAN side. If it's WAN, it pages the IP200xx on IG6600 WAN side, but under the same Router with IG6600. If it's Both, it pages the all IP20xx on LAN and WAN.

Start Paging Group number: 3 paging groups are defined in IG6600. If dialing a Paging Group number, the call will page to predefined internal IP phones. It can also

select the Range like All Paging Number. The maximum phones for each paging group are 24.

While pressing “Configuration” in “Start Paging Group number”, it shows Paging Group Configuration screen. (Figure 6-76)

Figure 6-76. Voice – System – Numbering Plan – Paging Group

Start ICD Group number: 4 ICD groups are defined in IG6600. The maximum phones for each ICD group are 25. If one ICD Group is assigned to Answer Position of certain line, when there is an incoming trunk call, extensions of the ICD group will be called and ringing

While pressing “Configuration” in “Start ICD Group number”, it shows ICD Group Configuration screen. (Figure 6-77)

Figure 6-77. Voice – System – Numbering Plan – ICD Group

There are six items to be decided.

For Ring Mode: The “All Ring” mode is no needed to use “No Answer Time” and “Timer Enable”.

For other items: If “Timer Enable” is YES, the incoming call will be transferred to another ICD Group’s member every “No Answer Time”. If NO, the call will ignore “No Answer Time” and finally reroute to “Reroute Destination” after “Reroute Time”. “ICD Group Name” is shown on the phone when receiving the ICD Group call.

System Speed Dial: Speed Dialing allows you to store frequently outgoing numbers. There are 100 sets to configure (600~699). Extension’s Class of service (COS) can also be checked or not. (Figure 6-78)

Figure 6-78. Voice – System – Speed Dial

Start Call Park Number: IG6600 supports to park 4 trunk calls maximum. The Call Park number can be programmed on the line keys.

6.7.3.2 Service Mode

This page allows you to configure the day/night/time service mode. You can also customize the working time manually for each weekday.

If you choose Time Mode, it’s for the specified day of week. The time is entered in 24-hour format. Valid entries are 00:00 to 23:59 in 1-minute increments. (Figure 6-79)

Figure 6-79. Voice – System – Service Mode

6.7.3.3 Transmission

This page allows you to configure the Audio, FXS, and FXO settings. Click “Save Settings” button to save the new configuration. (Figure 6-80,Figure 6-81)

Figure 6-80. Voice – System – Transmission – 1

Audio: It is used to set many Audio-related options. It will be applied to the all FXS and PSTN lines.

Country: It may be used to determine not only the Caller ID detection/transmission method but also ring/tone cadence/frequency.

RTP Packet Size: 10/20/30/40/50/60 ms.

Codec G.711 u-law, G.711 a-law, G.726-16, G.726-24, G.726-32, G.726-40: IG6600 supports different audio priority. You can choose “None”, “First”, “Second”, “Third”, “Fourth”, “Fifth” and “Sixth”.

FXS: It is used to set many FXS-related options.

Fax Support: The system supports FAX/modem tone detection with G.711 and T38 mode.

Call ID Method: The system provides the ability to detect the calling party identification provided by PSTN lines. It also transmits the calling party identification to POTS ports. There are four choices: NONE, DTMF_BR, DTMF_AR, FSK.

Inter-digit Timeout: Its range is from 2 to 9 seconds.

Figure 6-81. Voice – System – Transmission – 2

FXO: It is used to set many central office line options.

Call Abandon Time: For every PSTN/FXO call, system provides the facility to monitor the call status. If the remote party hangs up, the ongoing call must be terminated. The PSTN line monitor is done by the loop-break signal or busy tone. The value range is: Disable/100/200/…/1000 ms.

Ring Recognition Time: The timer determines the minimum ring duration recognized as a valid incoming ring on a FXO port. Shorter ring signals are ignored. The timer range is 200ms to 600ms in 40ms increments.

Delay Ring Time: The timer is to allow the Central Office to send ICLID before the call is answered. Once the timer expires, the programmed extensions will ring and the ICLID number will be sent to the ringing extensions. The timer range is 3 to 6 seconds on 0.5 second increments.

Dial Wait Time: When the user seizes a PSTN/FXO line, the Stable Time delay is needed to wait the dial tone from Central Office. Its range is from 350 to 950 ms.

Inter-digit Timeout: Its range is from 2 to 9 seconds.

Flash Time: The on-off duration for sending the FLASH signal. Its range is from 90 to 700 ms.

Flash New Call: If this item is set “Enable”, a call will be taken account of a new call when the CO FLASH feature is used.

FXO to FXO Call Duration: The maximum calling time between two FXO lines.

DTMF Signal On/Off Duration: The on/off time duration of DTMF signal. Their ranges are from 50 to 200 ms.

Pause Time: The pause time of alphabet “p” in the process of call dialing. The four values are 1.5, 2.5, 3.5, and 4.5.

Ring Abandon Time: It specifies the maximum time between valid ring signals from the CO/PBX. If the duration between rings exceed the Ring Abandon time, IG6600 stops ringing the destination(s) and the port returns to idle.

6.7.3.4 IGW Group

Several IG6600s can be set into an IGW Group. IGW Group’s members can share the whole trunks.

In an IGW Group, one master IG6600 and at most 9 slave IG6600s are available. Master IG6600 must have a public/static IP address. Master and all slave IG6600s share one password for authentication. If the IP address of master is set in a slave IG6600, slave IG6600 sends its IP address, name, and password to the master. Master IG6600 verifies the received password and name. If the password is valid and the name is not duplicated, master IG6600 sends the IGW list to all slave IG6600s. (Figure 6-82)

Figure 6-82. Voice – System – IG6600 Group

6.7.3.5 SMDR

SMDR (Station Message Detail Recording) will take down user's dialing record. It contains every calling period. From the log of SMDR, the administrator can charge some fees from the user.

This page allows you to view the SMDR record and configure the SMDR. Click "View SMDR" button to view the SMDR record, and click "Configure SMDR" button to configure the SMDR. (Figure 6-83,Figure 6-84,Figure 6-85)

Figure 6-83. Voice – System – SMDR

Figure 6-84. Voice – System –SMDR Record

The "PSTN Outgoing Call Duration Start Time" is used to estimate whether the PSTN outgoing call to be recorded. If the duration is less than it, the call won't be recorded. If

log mode is configured, the specified SMDR record will be sent to local or/and remote log server.

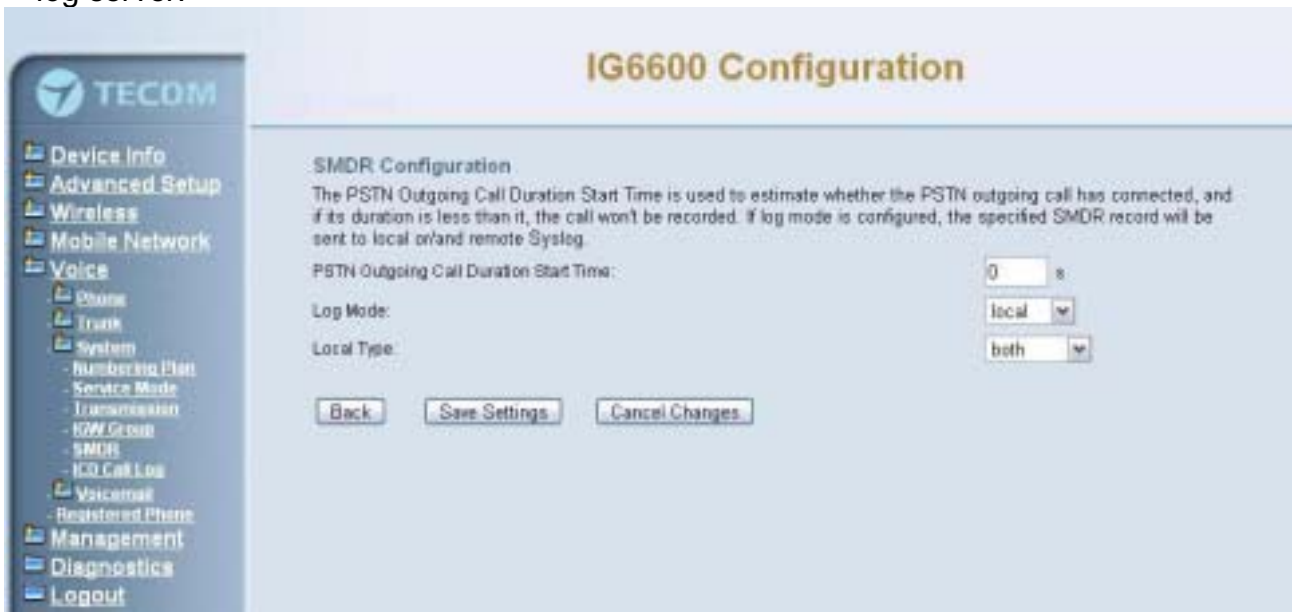


Figure 6-85. Voice – System –SMDR Configuration

6.7.3.6 ICD Call Log

This page shows the Call Log for incoming call to ICD group. (Figure 6-86)

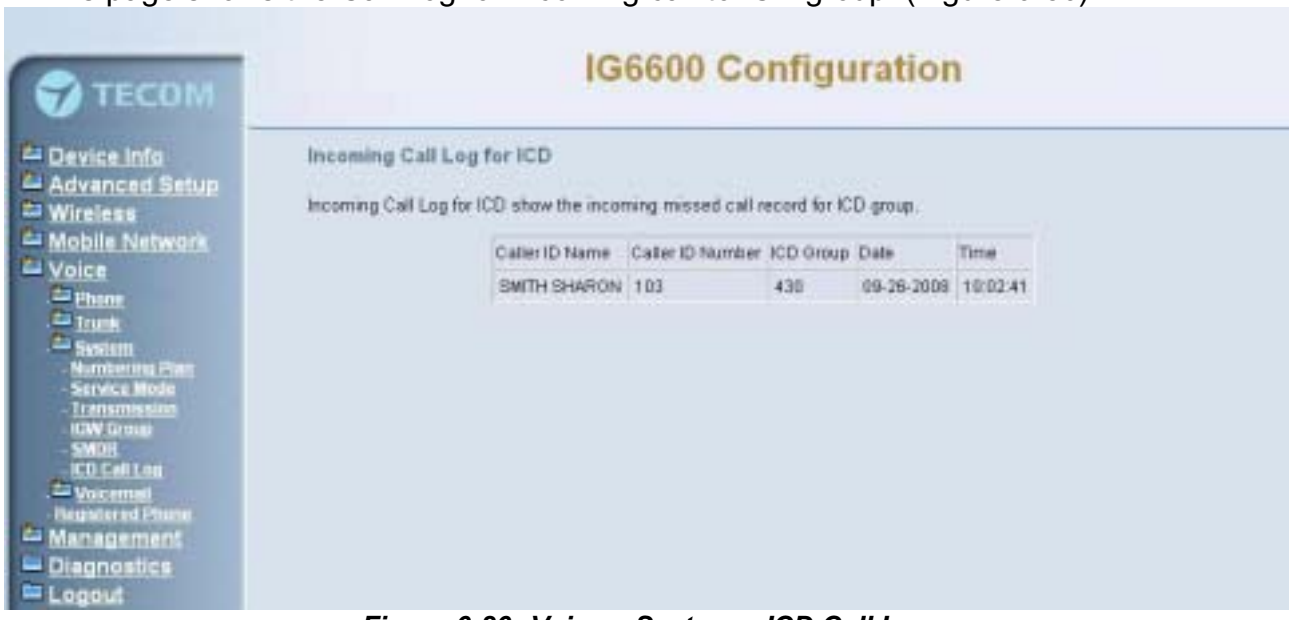


Figure 6-86. Voice – System – ICD Call Log

6.7.4 Voice Mail

IG6600 provides a built-in Auto Attendant and Voice Mail System. It is separated into 4 parts:

- General
- Extension
- Holiday
- Advanced

The configurable items for each part would be described in the following.

6.7.4.1 General

This page allows you to configure the general settings of the auto attendant and voice mail. (Figure 6-87,Figure 6-88)

Auto Attendant:

Working Time: Weekday's working time.

Saturday Working Time: 00000000 means Saturday Holiday.

Sunday Working Time: 00000000 means Sunday Holiday.

Lunch Break Time: The time for lunch break.

Admin Password: The password of administrator.

Max Try Time: Maximum error times for extension's key input.

Action When Max Error Reached: You can set the system "Forward to operator" or "Disconnect" when reaching the "Max Try Time" errors for key input.

Prompt Language: Automated Attendant language type. It provides one or two languages to be chosen.

Voice Mail:

Email Notify with Voice Files: Add attached WAV file in notifying email for leaved message.

Days for Keeping Voice Mail: Keep days for leaving messages. 0 means that the messages are kept until the users delete them.

SMTP Support SSL: Choose "Yes" to support SSL.

SMTP Server: SMTP Mail Server.

SMTP Server Port: SMTP Mail Server port. The default value is 25.

Sender Email Address: Email Address of Sender.

Sender User Name: User Name of Sender's Email.

Sender Password: Password of Sender's Email.

Max recording time: The range of recording time is form 1 to 30 minutes.

Silence detection for VM recording: Set "Enable" of this item will do the silence detection in VM recording. If "silence" is detected, IG6600 will terminate the recording and release the line.

Voicemail Tag: Voicemail tag

Email header: Email header

Figure 6-87. Voice – Voice Mail – General – 1

Figure 6-88. Voice – Voice Mail – General – 2

6.7.4.2 Extension

Voice Mail extension configuration allows you to configure voice mail settings for each extension. While pressing “Configure”, it shows Extension Voice Mail Configuration screen. (Figure 6-89)

Figure 6-89. Voice – Voice Mail – Extension Registration

The following items will be configured in the Extension Configuration (Figure 6-90):

Voice Mail: Enable/Disable. To disable this item, there is not allowed to listen to the message from outside party. (See Appendix 3.2.3)

Password: Password of voice mailbox of the extension.

E-mail Address: Phone user’s E-mail Address.

Prompt Language: Provides one or two language to be chosen.

Figure 6-90. Voice – Voice Mail – Extension – Extension Configuration

6.7.4.3 Holiday

This page allows you to configure the holiday or special off-duty days. You can click the buttons under the table to choose pages. (Figure 6-91)

Figure 6-91. Voice – Voice Mail – Holiday

6.7.4.4 Advanced

This page allows you to browse, upload or download voice files through IG6600's ftp server. (Figure 6-92)

Figure 6-92. Voice – Voice Mail – Advanced

6.7.5 Registered Phone

This page lists the information of registered phones, and provides the link to access the phone's web page. (Figure 6-93)

Figure 6-93. Voice – Registered Phone

6.8 Management

The system administrator can do the following functions to manage the configurations, events, and software update of the IG6600.

- Settings
  - Backup
  - Update
  - Restore Default
- System Log
- TR-069 Client
- Time Settings
  - Internet Time
  - Daylight Saving Time
- Access Control
  - Web Port
  - Password
- Update Software
- Reboot

6.8.1 Settings

System Administrator can Backup and Update the IG6600's settings. The settings can be saved from IG6600 to PC. The saved setting file can also be loaded from PC to IG6600. These functions can help the system administrator to manage large amount of IG6600s efficiently. Restore Default would set the IG6600 with the factory default configuration.

6.8.1.1 Backup

Click "Backup Settings", you may save your IG6600's configurations to a file on your PC. (Figure 6-94)

Figure 6-94. Management – Settings – Backup

6.8.1.2 Update

Click “Browse” to locate the setting file saved on the Local PC. Then, click “Update Settings” would apply the settings to the IG6600 according to the configuration file. (Figure 6-95)

Figure 6-95. Management – Settings – Update

6.8.1.3 Restore Default

Click “Restore Default Settings” to restore the factory default settings. This would be helpful when the settings mass up. After IG6600 returns to factory default settings, the wizard setup is invoked automatically when the administrator accesses to IG6600’s web server. (Figure 6-96)

Figure 6-96. Management – Settings – Restore Default

6.8.2 System Log

This allows system administrator to view the system log and configure the system log options. Click "View System Log" to view the system log. Click "Configure System Log" to configure the system log options. (Figure 6-97,Figure 6-98)

When you configure the system log options, you can see Log Levels and Display Levels: Emergency, Alert, Critical, Error, Warning, Notice, Informational, and Debugging. The Log Level implies that what log level is applied to IG6600 to record the log. The Display Level would just show the users the log message that they want to know. As a result, Display Level was just a subset of total log messages. If “Mode” is set to “Remote” or “Both”, the log messages would be sent to the specified UDP port of the specified log server. Click “Apply/Save” button that you can save the new configuration.

Figure 6-97. Management – System Log

Figure 6-98. Management –System Log – System Log Configuration

6.8.3 TR-069 Client

WAN Management Protocol (TR-069) allows an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device. Firmware upgrade or vendor configuration file backup can be done remotely on ACS server. Select the desired values and click "Save Settings" to configure the TR-069 client options. (Figure 6-99)

Inform: It can be set to Disable or Enable for periodically inform every Inform Interval. Fill the correct ACS URL, ACS username/password and select Interface, the TR-069 client is able to connect to ACS server.

Display SOAP message on serial console: Disable/Enable.

Connection Request Authentication: The “Connection Request User Name” and “Connection Request User Password” are used for the server to initiate an ACS initiation connection.

Figure 6-99. Management – TR-069 Client

6.8.4 Time Setting

This item allows you to configure system’s time and the Daylight Saving Time.

6.8.4.1 Internet Time

This page allows you to configure the NTP time server so the IG6600 can synchronize its system time with NTP time server automatically (Figure 6-100).

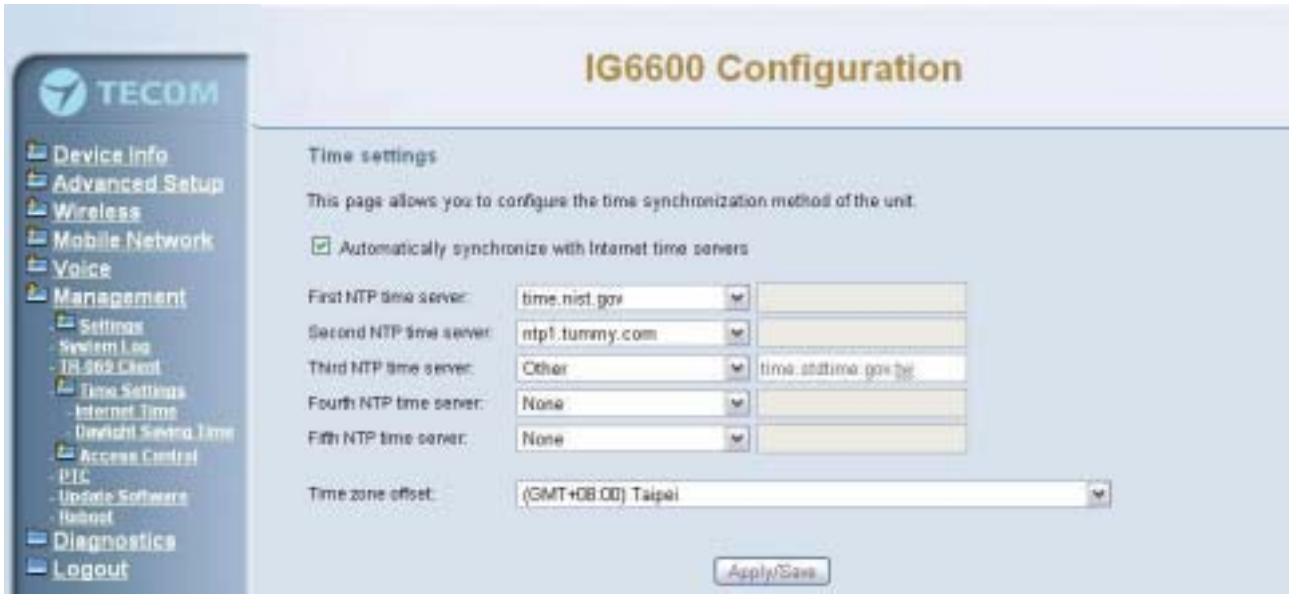


Figure 6-100. Management – Time Setting – Internet Time – NTP setting

6.8.4.2 Daylight Saving Time

Figure 6-101. Management – Time Settings – Daylight Saving Time

Figure 6-102. Management –Time Settings – Day Light Saving Time – Manual DST Rule

This page allows you to configure the Daylight Saving Time (DST) which supports auto adjustment for daylight saving time. Click “Save Settings” button that you can save the new configuration. Click “Cancel Changes” button that you can cancel the changes. (Figure 6-101,Figure 6-102)

Default International DST Rule*:* Default DST Rule obey international standard rule.

Manual DST Rule*:* Define your own DST Rule.

Start Time of DST: The date and time to start daylight saving.
If “Weekday” is 0, it means the date to start daylight saving is at exactly the given date. If “Weekday” is not 0, the DST starts on the “Weekday” on or after the given date.

End Time of DST: The date and time to end daylight saving.
If “Weekday” is 0, it means the date to end daylight saving is at exactly the given date. If “Weekday” is not 0, the DST ends on the “Weekday” on or before the given date.

Save Time during DST Period: The amount of hour/min/sec to add to the current time during daylight saving period.

6.8.5 Access Control

This item allows you to configure Web Port and password for user, support, and administrator.

6.8.5.1 Web Port

This page allows you to change the IG6600's web port. And it will take effect after reboot. (Figure 6-103)

Figure 6-103. Management – Access Control – Web Port

6.8.5.2 Password

In this page you can define the passwords for administrator, support, and user. The Administrator has unrestricted access to change and view configuration of your IG6600. The Support is used to allow an ISP technician to access your IG6600 for maintenance and to run diagnostics. The User can access the IG6600, view configuration settings and statistics, as well as, update the router's software.

Use the password field to enter up to 16 characters. Note: Password cannot contain a space. (Figure 6-104)

Figure 6-104. Management – Access Control – Password

6.8.6 PTC

IG6600 can connect to a PTS for upgrade firmware. You can configure IG6600 name, PTS server URL and Time interval for check new firmware version. (Figure 6-105)

Figure 6-105. Management-PTC

6.8.7 Update Software

The new released software could be upgraded from the Local PC side or remotely. Click the “Browse” to locate the new software image file in the PC. Then, click “Update Software” to process the software update. NOTE: The upgrade process takes about 5 minutes to complete, and your IG6600 will reboot. (Figure 6-106)

Figure 6-106. Management – Update Software

6.8.8 Reboot

Figure 6-107. Management – Save/Reboot

Click “Reboot” to reboot the IG6600. The IG6600 would automatically save the configuration before reboot, so that modified settings would take effect after reboot. (Figure 6-107)

6.9 Diagnostics

This page provides the following information to users: (Figure 6-108,Figure 6-109)

- The network connection information on the net.
- The status of IG6600's PSTN Line.
- The status of IG6600's IP Trunk Line.
- The status of IG6600's AA Line.
- The status of IG6600's FXS.

1) Network Connection

PASS: Normally connected

FAIL: Connecting fail

DOWN: No connection

2) PSTN Line / IP Trunk Line / AA / FXS

FAILED: Connecting fail or registering failure

IDLE: The line is idle

N/A: The line is not available

Busy: The line is in use

For Refresh Mode, if user select automatically refresh, the web page will automatically refresh for every 20 seconds.

Click "Disconnect" button will allow you release the selected trunk line or rescue the blocked one.

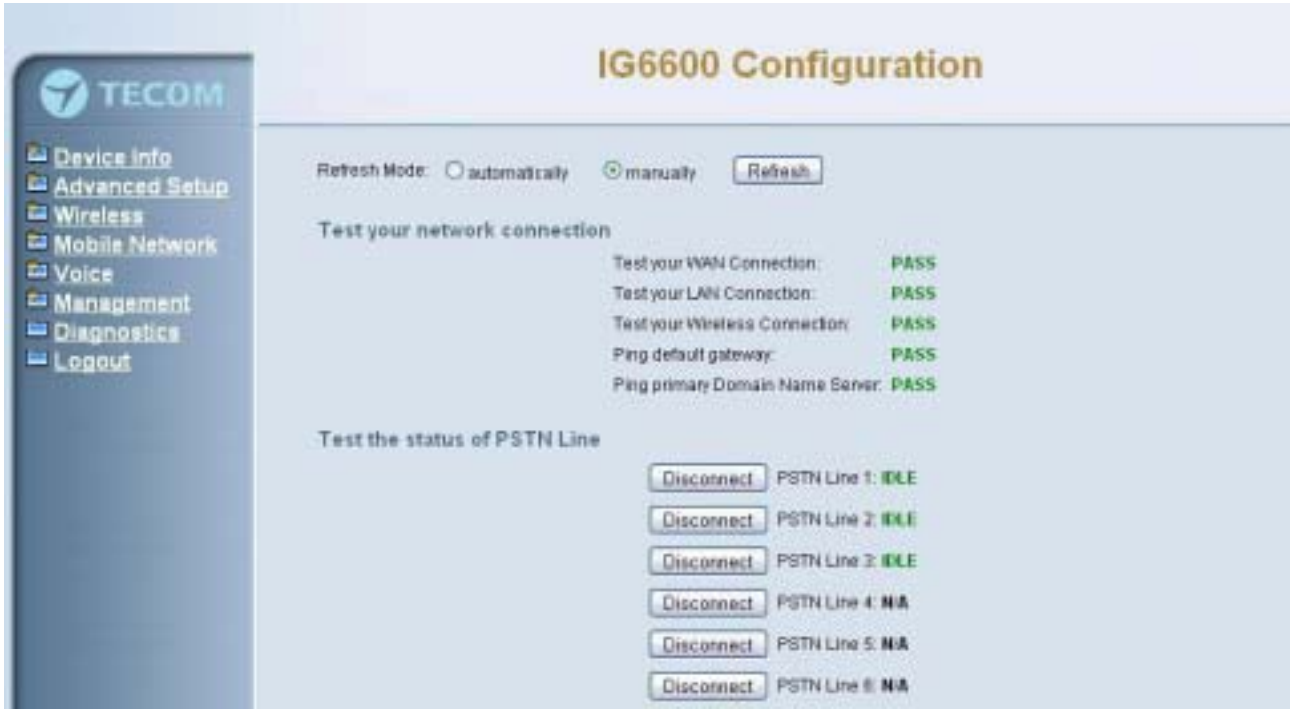


Figure 6-108. Diagnostics – 1

Figure 6-109. Diagnostics – 2

6.9 Logout

Press “Logout”, you can logout the IG6600 web configuration page.

Appendix 1: Product Summary

TCP/IP Protocols

- IP Protocol (791)
- ARP (RFC 826) / RARP (RFC 903)
- ICMP (RFC792)
- TCP (RFC 793)
- UDP (RFC 768)
- SNTP
- DNS
- HTTP
- Telnet
- TFTP
- RTP
- Static Routing
- NAT with ALGs

IP Address Assignment

- Static
- Dynamic
- Subnet Mask
- PPPoE Client (RFC 2516)
- Primary and Secondary DNS
- DHCP Server (RFC 2131-2132)
- DHCP Client (RFC 2132)

Routing

- RIP v1/v2
- Static routing
- DHCP Server/Relay/Client
- DNS Relay
- NAT/NAPT

Virtual Server

- Virtual Server
- Port Trigger
- DMZ

QoS

- IP ToS function (RFC 1349)
- Priority queues for upstream traffic based on ToS field.
- IP Precedence
- Bandwidth Control

3G

- 3G HSDPA dongles for WAN backup and 3G interface

VoIP Protocols

- SIP (RFC 3261)
- SDP(RFC2327, RFC3264)
- Real Time Protocol (RTP ; RFC 1889)
- MD5 (RFC3261 HTTP) digest authentication
- G.168 Echo Cancellation
- Voice Codec: G.711u, G.711a, G726-16, G726-24, G726-32 and G.726-40 (G.729a optional)
- Support FAX/modem tone detection and auto-fallback to G.711
- T.38

IP Trunk

- Support up to 8 IP Trunks
- SIP message, including INVITE, re-INVITE, ACK, CANCEL, OPTIONS, BYE, REGISTER, INFO, REFER, SUSCRIBE/NOTIFY and REPLACE messages.
- SIP Outbound Proxy, SIP Proxy and Registrar
- Auto-Registration when power-on or period
- Session Timer support
- Support IP address, domain name, user name, display name for SIP URL

Digital Audio

- Codec: G.711 a-law/μ-law 64Kbps, G.726-16/24/32/40
- SIP Call Offer /Answer: Codec auto capacity exchange
- Echo Cancellation: G.168 for each voice line
- Silence Detection/Suppression
- Comfort Noise Generation
- Adaptive jitter buffer
- Different frame size support (10,20,30,40, 50, and 60ms)
- Packet loss concealment
- Out-band (RFC2833) and In-band DTMF

Security

- Password protected system management
- User authentication for PPP (PAP/CHAP/MSCHAP)
- Firewall
- Packet Filtering
- Access Control List
- Wireless Security:
  Support WEP (64, 128-bit) encryption
  802.1x and WPA/WAP2 authentication
  MAC Address-based access control
  WDS support

Configuration Management

- LAN/WAN management via Telnet interface or Web-based browser interface
- Firmware upgrade available by TFTP/ HTTP
- Status display and event report from Web-based management
- Configuration Save and Restore
- Reset to factory default

Radio - WLAN

- Standard : IEEE 802.11b/g/n
- Media Access Control : CSMA/CA with ACK
- Modulation : OFDM/CCK
- Frequency Range (Range depends on different country)

Remote Diagnostic

- Syslog
- Device Diagnostic, Enable remote test following:
  Test the connection to your local network,
  The connection to your Internet service provider,
  The status of PSTN Line,
  The status of IP Trunk Line,
  The status of VAA Line,
  The status of FXS

Physical Interfaces

- One 10/100/1000BaseT Ethernet port (RJ-45) for WAN interface
- One 10/100BaseT Ethernet port (RJ-45) for LAN interface

- One Telephone interface (RJ-11)
- Six PSTN Line interface (RJ-11)
- One USB Host interface

LED Status

LED Name	Color	Status	Description
POWER	Red/Blue	Red On	Firmware updating
		Blue Flashing	System booting up
		Blue On	System initialized and running
		Off	Power off
WIRELESS	Blue	On	Wireless LAN is active
		Off	Wireless LAN is idle
LINE (1-6)	Blue	Off	PSTN Line is idle
		On	PSTN Line is active
TEL	Blue	Off	Phone is idle
		On	Phone is active
LAN	Blue	On	LAN is connected
		Off	LAN is not connected
		Flashing	LAN activity present (traffic in either direction)
WAN	Red/Blue	Blue On	WAN is connected and IP is obtained
		Red On	WAN is not conneced or no IP assigned
		Flashing	WAN activity present (traffic in either direction)

Power Requirement

- Input : Voltage Range 90~230 VAC
- Output : 12V DC / 1.5A

Operating Environment

- Temperature : 0~40℃
- Humidity : 10 to 90%, non-condensing

Physical Specification

- Dimension : 190(W) x 280(L) x 34(D) (mm)

Appendix 2: Feature Access Codes

The Feature Access Codes are applied in Tecom IP2032/2061/2062 Phones and FXS phone only. It's to activate/cancel some IG6600 user-specified functions.

These Feature Access Codes are used when the phone is at idle state.

Direct Call Forward

Forward all of the calls without regard to the extension status.
(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*21 + Type + Ext/VAA/ICD No.
*21 + Type + * + (PSWD) + * + Outside Number

To Cancel

**21

Busy Call Forward

Forward the calls if the extension is busy.
(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*22 + Type + Ext/VAA/ICD No.
*22 + Type + * + (PSWD) + * + Outside Number

To Cancel

**22

No Answer Call Forward

Forward the calls if the extension doesn't answer the call within No Answer Time.
(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*23 + Type + Ext/VAA/ICD No + * + Time.
*23 + Type + * + (PSWD) + * + Outside Number + * + Time.

To Cancel

**23

DND Call Forward

Forward the calls if the extension enables DND.
(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*24 + Type + Ext/VAA/ICD No
*24 + Type + * + (PSWD) + * + Outside Number

To Cancel

**24

Follow Me Call Forward:

Forwards calls at your extension to the extension where you are currently working.
(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*25 + Type + Ext No + * + Password

To Cancel

To disable, dial **25 + Ext No + * + Password

Call Fork

When extension gets an incoming call, the extension gets ringing. It rings another extension or rings an outside destination simultaneously.
(Type: 0 – ICM; 1 – Outside; 2 – Both)

To Activate

*26 + Type + Ext No
*26 + Type + * + (PSWD) + * + Outside Number

To Cancel

**26

Do Not Disturb

Extension users can enable DND to stop incoming calls from ringing at their phone.

To Activate

*4

To Cancel

**4

Call Pickup

Users can answer the calls at another extension. The feature allows you to easily access calls ringing via the feature access code.

*53 + Ext No.

COS Following

It changes the individual COS of the extension temporarily.

*55 + (phone number) + (password)

Call Back Busy (for IP20xx only)

When remote party is busy, press 6 to wait call back. Press **66 to delete the record.

To Activate

6

To Cancel

*66

Reset Feature Buttons

Reset all feature buttons to IG6600's setting.

*68 + (Password)

Reset To Default

Selected IG6600 extension features can be returned to default setting.

*69+(password)

Feature Key Programming

To program the line keys as a PSTN, IP Trunk, Trunk Group number, Call-Park number or Extension number.

*70 + (Feature Key number: 01 – 28(*)) + (PSTN, IP Trunk, Trunk Group number, Call-Park number or Extension number)

Note: IP2032 provides 2 keys for feature access.

IP2062 provides 4 keys for feature access.

IP2061 supports EDM module, it provides 24 more (total 28) keys for feature access.

Service Mode Selection

Change Service Mode from Operator

*79 + (Service Mode, 1 – 3) + (password)

(Service Mode:

1: Day Mode

2: Night Mode

3: Time Mode)

Agent Log On/Off

It can control the status in an ICD group.

To Activate (Log On)

*91

To Cancel (Log Off)

**91

Phone Lock/Unlock

You can use the Lock feature to prevent unauthorized trunk calls from being made from extension.

To Activate Phone Lock

*97 + (password)

To Cancel Phone Lock

**97 + (password)

Call Waiting

If disabled, it returns busy response while getting second call at non-idle state

To Activate

*98

To Cancel

**98

Page Allow/Deny

Block one-way paging (group and all page) over the IP phone speaker

To Activate Page Deny

*99

To Cancel Page Deny

**99

Appendix 3: Auto Attendant and Voicemail System

Appendix 3.1 System Voice Prompts

Appendix 3.1.1 Preset Voice Prompts

IG6600 provides two languages service for the all voice files. The all files are saved in vox folder in PCM u-law format. The only difference of the file name in the both languages is the leading digit of the file name. It's "1" for the first language, "2" for the second language.

File#	Contents	Application
10001	Hello, please dial the extension number directly or press zero for the operator	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in working hours.
10002	Hello, it is out of the office hours, please dial the extension number directly or press zero for the operator	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in off hours.
10003	Hello, it is lunch time, please dial the extension number directly or press zero for the operator	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in lunch hours.
10004	Hello, today is holiday, please dial the extension number directly or press zero for the operator	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in holidays.
10051	Please dial the phone number, at the end, press pound key (#)	It requests to dial a phone number.
10097	This mailbox's capacity is used. There is no room for more messages.	It talks to the Caller it has no room to store the leaving messages.
10102	The number is incorrect, your call will be transferred to the operator	AA gets non-existed extension number input many times. AA will transfer the call to Operator.
10103	The number is incorrect	It's played while the user makes an incorrect input
10104	Please check your number and dial again	It's played before AA hangs up the call.
10106	The number is incorrect, please dial again	AA gets non-existed extension number input and allows the caller to redial.
10107	The number is incorrect, Please check your number and dial again, bye bye!	AA gets non-existed extension number input many times. AA will drop the call.
10201	Your call is in transferring, please wait	It's played before AA transfers the call to the transferred party.
10205	The extension line is busy, to wait for a retry, please press the star key (*)	The transferred destination is busy. AA provides some choices for the user.
10206	The number you dialed is not available, to wait for a retry, please press the star key (*)	The transferred destination doesn't answer the call in 30 seconds. AA provides some choices for the user.
10207	To leave a message, press the pound key (#)	Same as 10205 or 10206, another choice.
10210	To dial another number, press zero for the operator	Same as 10205 or 10206, another choice
10212	The number you dial is not answered, to wait or a retry, please press the star key (*)	
10221	Sorry, the number you dialed is not available, please dial another number, or press zero for the operator	It's played while transferring a call to an extension set "Reject" of dial in.
10301	Please leave your message after the beep, when finish, press the pound (#)	It reminds the user how to leave messages.
10302	Your message has been recoded	Finish leaving message.
10303	To confirm recording, press one To listening to your record, press two To record your message again, press three To cancel your recording, press four When finishing, press the pound (#)	It's played after finishing leaving message.
10304	Your message has been saved	The leaving message is recorded.
10305	End of messages	Notity that all leaving messages are played
10306	Thanks for your using, goodbye	It's played while finishing Voicemail System service.
10501	Please input mailbox number	It's played first while the user gets into Voice Mail Box through the FXO/IP trunks.
10502	Sorry, no such a mailbox number, please try again	It's played if the user dials an invalid mailbox ID..

10503	The mailbox has not enabled, please dial another number	It's played if the user dials a valid, but disabled mailbox ID.
10504	Please input your password	It requests the user to enter the password of the mailbox.
10505	The password is incorrect, please try again	The user dials an incorrect password. It allows the user to try again.
10506	The password is incorrect, please check it and try later	The user dials incorrect password over 3 times. It disallows the user to try again.
10507	To listen to the message, press one To delete all messages, press two To record your personal greeting, press three To change the password, press four	It's played after entering Voice Mail Box.
10510	You have no messages	No leaving message in the mailbox.
10511	You have	It will report how many leaving messages in the mailbox.
10512	messages	It reports how many leaving messages in the mailbox. "xx messages"
10513	message	"x message"
10515	new	
10516	To listen to this message again, press one To listen to next message, press two To delete this message, press three To transfer this message to another mailbox, press four To listen to the previous message, press five When finish, press the pound key (#)	This message is played when user dial a digit other than 1~5 and # during message listening.
10517	This is the last message	It's played if it has played the all messages.
10518	To confirm the deletion, press star (*)	
10519	This is the first message	It's played if user order playback previous message when it has played the first message.
10521	You message has been transferred successfully	Transfer the leaving message to another mailbox well.
10522	Transferring failed	Fail to transfer the leaving message to another mailbox.
10523	Deleting, please wait	Voicemail system is deleting the all leaving messages.
10524	All messages are deleted	All leaving message are deleted.
10526	Please input new four digits number password	It reminds the user how to input the new mailbox password.
10527	The new password you entered is	It plays what the new input password is.
10528	To confirm the new input, press one To re-enter, press two To cancel and return to the previous menu, press the pound (#)	It's to ask whether the new input password is correct.
10529	Your password has been changed	It's to report the password is changed successfully.
10531	To listen to your greeting, press one To record new greeting, press two To delete the current greeting, press three When finish, press the pound (#)	It's for recording a user's temporally greeting.
10532	You have no greeting recorded	It's played if having no greeting message.
10533	Please record greeting after the beep. When finish, press the pound (#)	It reminds the user how to record the greeting message.
10534	Your recording is finished	It's played after finishing recording.
10547	The setting is completed	Finish setup.
10549	Deletion completed	It reports the leaving message is deleted successfully.
10550	Deletion failed	It fails to delete the leaving message.
10580	Sorry, the mailbox is in use	The mailbox is in use.
10601	Please begin to record after the beep, when finish, press the pound (#)	It reminds the administrator how to record the voice files.
10731	AM	ante meridiem
10732	PM	post meridiem
10733	Oh	Zero. Ex. February 3rd two oh two a.m. (Feb 03 2:02 a.m. = 2:02)
19001	Please input the administrator password	It requests administrator to enter the mailbox

		password.
19011	To record the first language greeting, press one To record the second language greeting, press two When finish, press the pound (#)	It's for recording system greeting message.
19012	To record the greeting for regular office hours, press one To record the greeting for out of office hours, press two To record the greeting for lunch time break, press three To record the greeting for holidays, press four When finish, press the pound (#)	It's to choose what kind of greeting message will be recorded.
19013	To listen to current voice file, press one To record the voice file, press two When finished, press the pound (#)	It's for recording voice files.
19015	There are no recording	The voice message is not yet recorded.
19073	The extension number that you entered is not installed in this system	It plays if entering a wrong extension number.
19200	Please input five digits number voice code. To cancel the input, please press the pound (#)	It's for entering voice file name.
19201	The voice file code you entered is	It's to play what voice file name is entered.
91000	For Language one, press one. For Language two, press two	If setting "Two Languages", it's played before Welcome message.
91100	Beep	It's played before recording any message.
pcmudial		Dial Tone - PCMU
pcmadial		Dial Tone - PCMA
g729dial		Dial Tone - G729
g726dial		Dial Tone - G726
pcmurb		Ringback Tone - PCMU
pcmarb		Ringback Tone - PCMA
g729rb		Ringback Tone - G729
g726rb		Ringback Tone - G726
mohpcmu		Music On Hold - PCMU
mohpcma		Music On Hold - PCMA
mohg729		Music On Hold - G729
mohg726		Music On Hold - G726

10870	0 zero	10871	1 one	10872	2 two	10873	3 three
10874	4 four	10875	5 five	10876	6 six	10877	7 seven
10878	8 eight	10879	9 nine	10880	10 ten	10881	11 eleven
10882	12 twelve	10883	13 thirteen	10884	14 fourteen	10885	15 fifteen
10886	16 sixteen	10887	17 seventeen	10888	18 eighteen	10889	19 nineteen
10890	20 twenty	10891	30 thirty	10892	40 forty	10893	50 fifty
10894	60 sixty	10895	70 seventy	10896	80 eighty	10897	90 ninety
10700	first	10701	second	10702	third	10703	fourth
10704	fifth	10705	sixth	10706	seventh	10707	eighth
10708	ninth	10709	tenth	10710	eleventh	10711	twelfth
10712	thirteenth	10713	fourteenth	10714	fifteenth	10715	sixteenth
10716	seventeenth	10717	eighteenth	10718	nineteenth	10719	twentieth

10720	21th	10721	22th	10722	23th	10723	24th
10724	25th	10725	26th	10726	27th	10727	28th
10728	29th	10729	30th	10730	31th		
10760	January	10761	February	10762	March	10763	April
10764	May	10765	June	10766	July	10767	August
10768	September	10769	October	10770	November	10771	December

Appendix 3.1.2 Voice Prompts Recording

You can change Voice Prompts by two ways:

Appendix 3.1.2.1 Through IP Phone Client

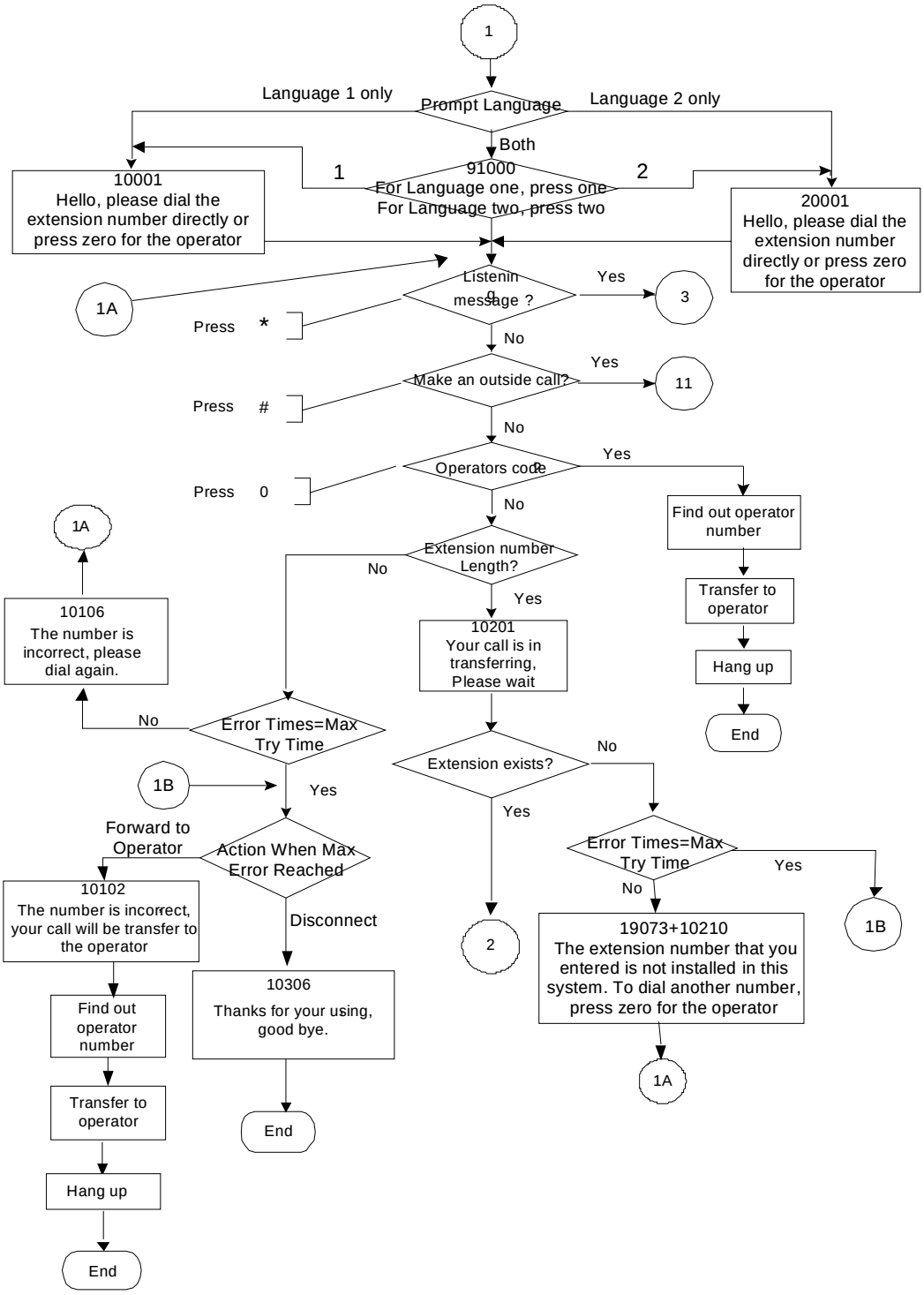
a. Use IP phone which is an extension of IG6600, dial Voicemail Directory Number (“100” at default).
b. Type in password of the extension. (“0000” at default).
c. Press "*" key right here, to enter the Administrator mode.
d. Type in Voicemail Administrator password (“000000” at default).
e. Listen to the prompt, press "1" to record the first language greeting (File 10001 – 10004). Press "2" to record the second language greeting (File 20001 – 20004).
f. Or press "3" directly, then type 5 digits file number to directly record prompt/greeting into the respective file name. (see Appendix 2.2.4.2)

Appendix 3.1.2.2 Through FTP Server directly

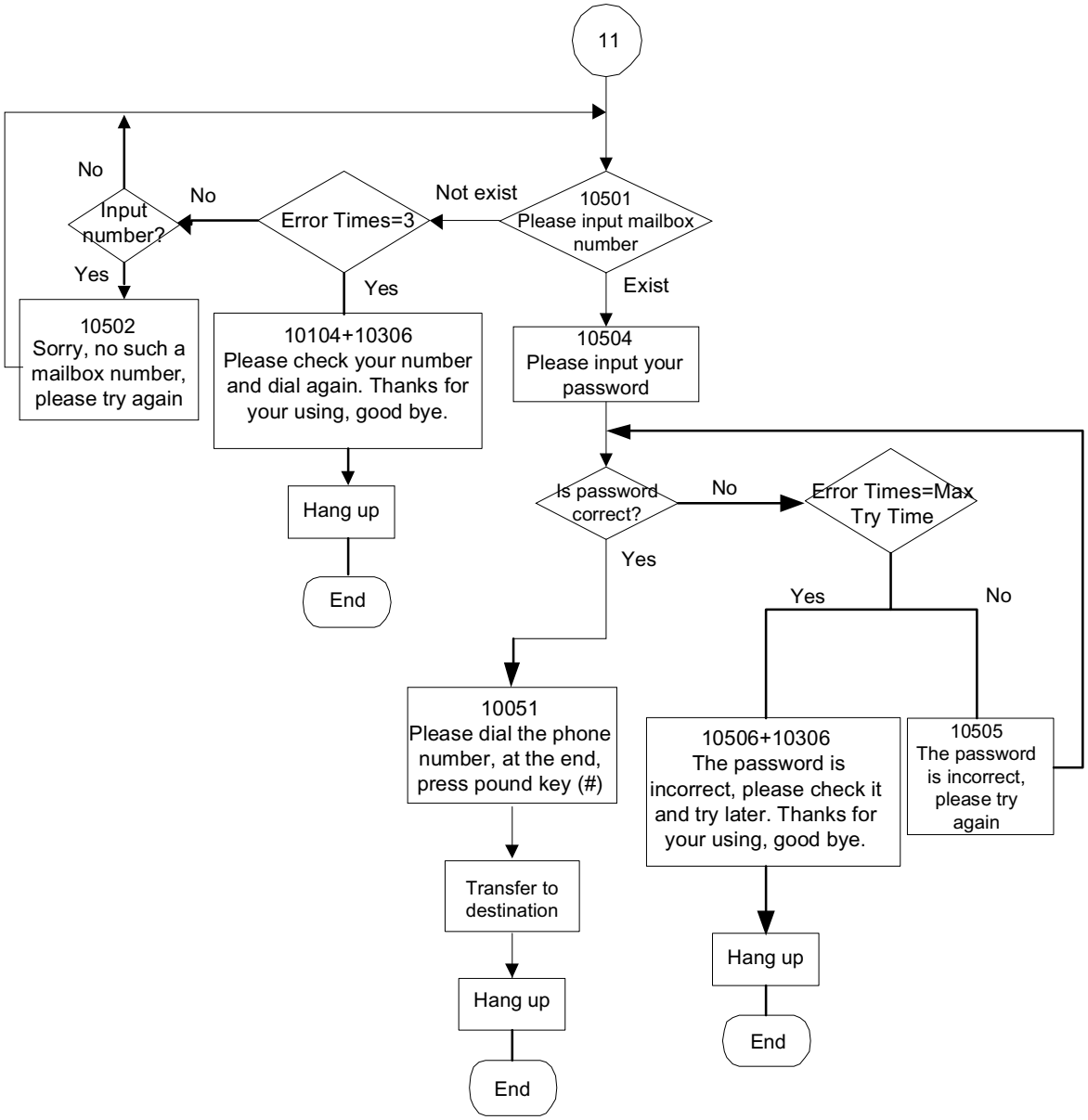
a. All prompt/greeting files are saved in vox folder in PCM u-law format. You can record your prompt in wav format first and then convert to PCM u-law. There are many free audio convert software on the internet.
b. Login IG6600 embedded FTP serve: ftp://IG6600 IP address. (Or in IG6600-Web, select “Voice” – “Voicemail” – “Advanced”, then press “Browser Voicemail file” button.). The voice files are in /vm/Vox.
c. Save the new prompt to vox folder with the same file number to replace the old prompt. (Suggest you to save all old prompts before updating the new files.)

Appendix 3.2 Flowchart

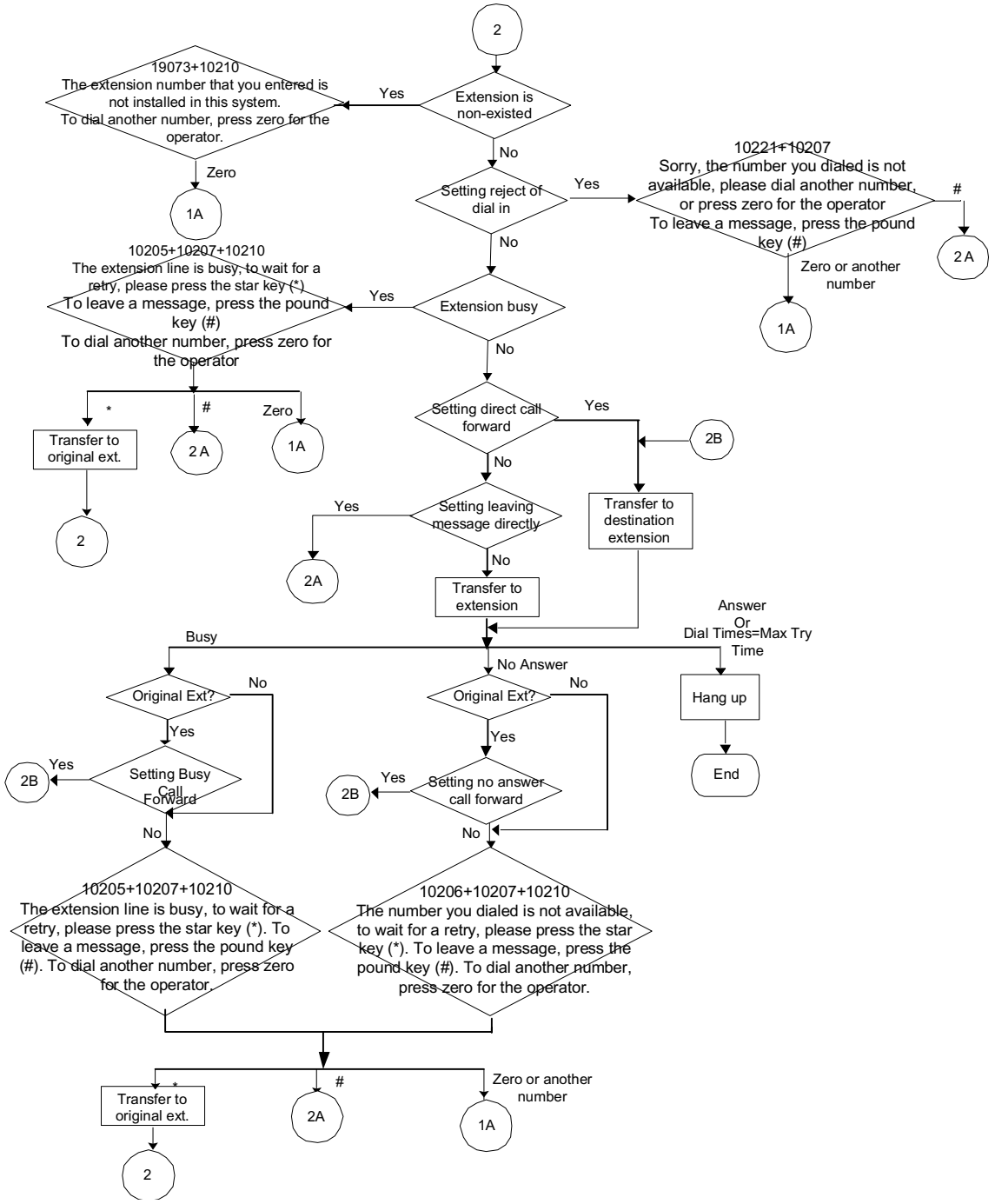
Appendix 3.2.1 Automated Attendant



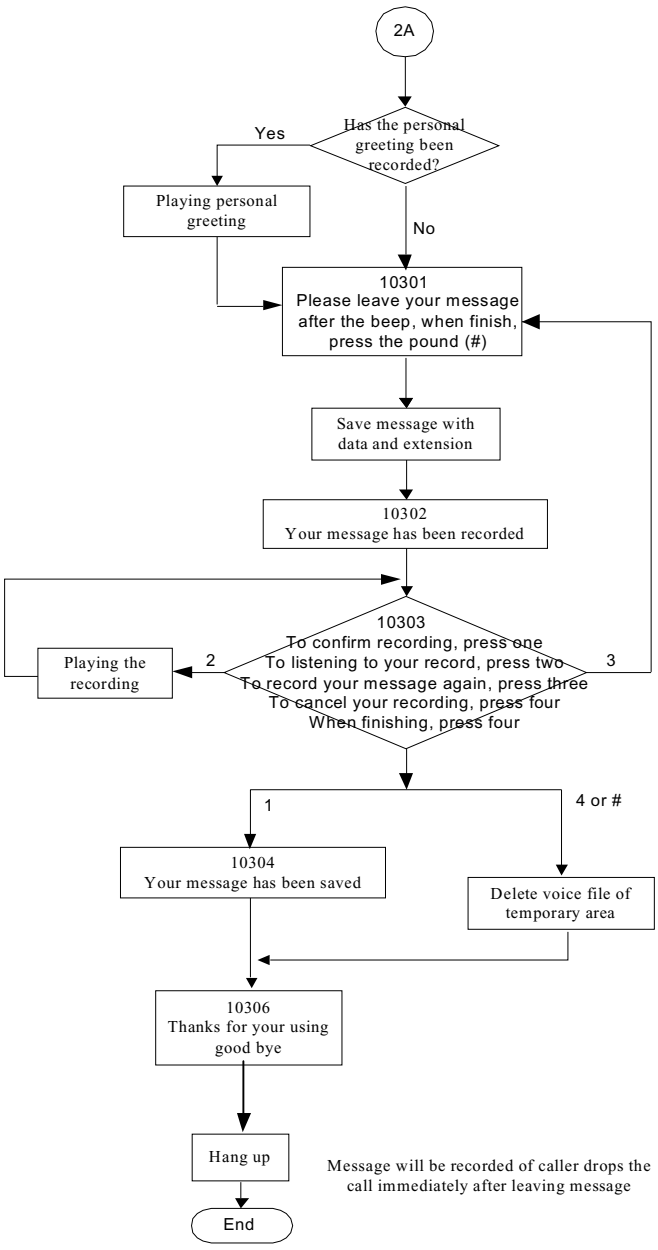
Appendix 3.2.1.1 Make an Outside Call



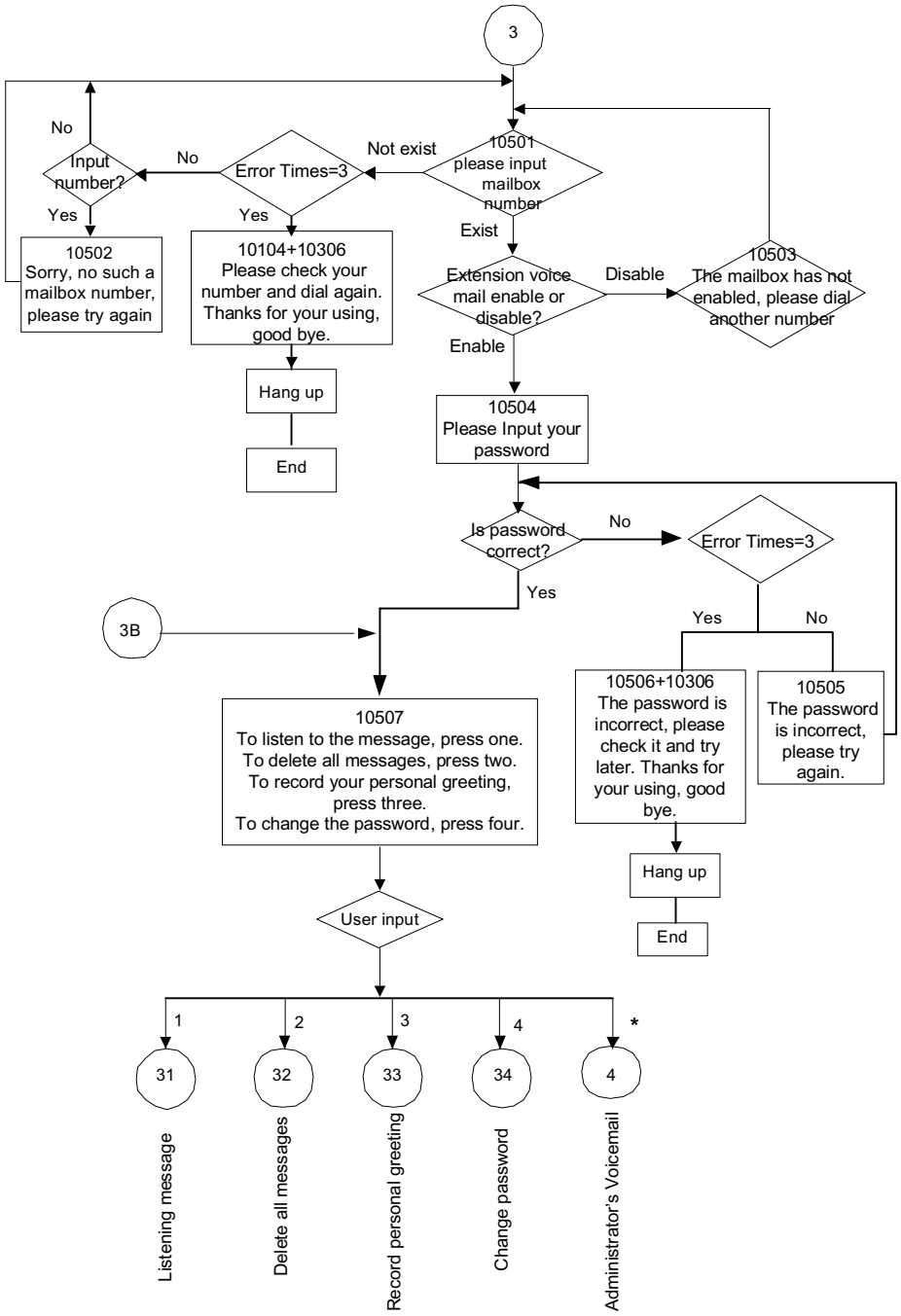
Appendix 3.2.2 Subscriber Voicemail Flowchart



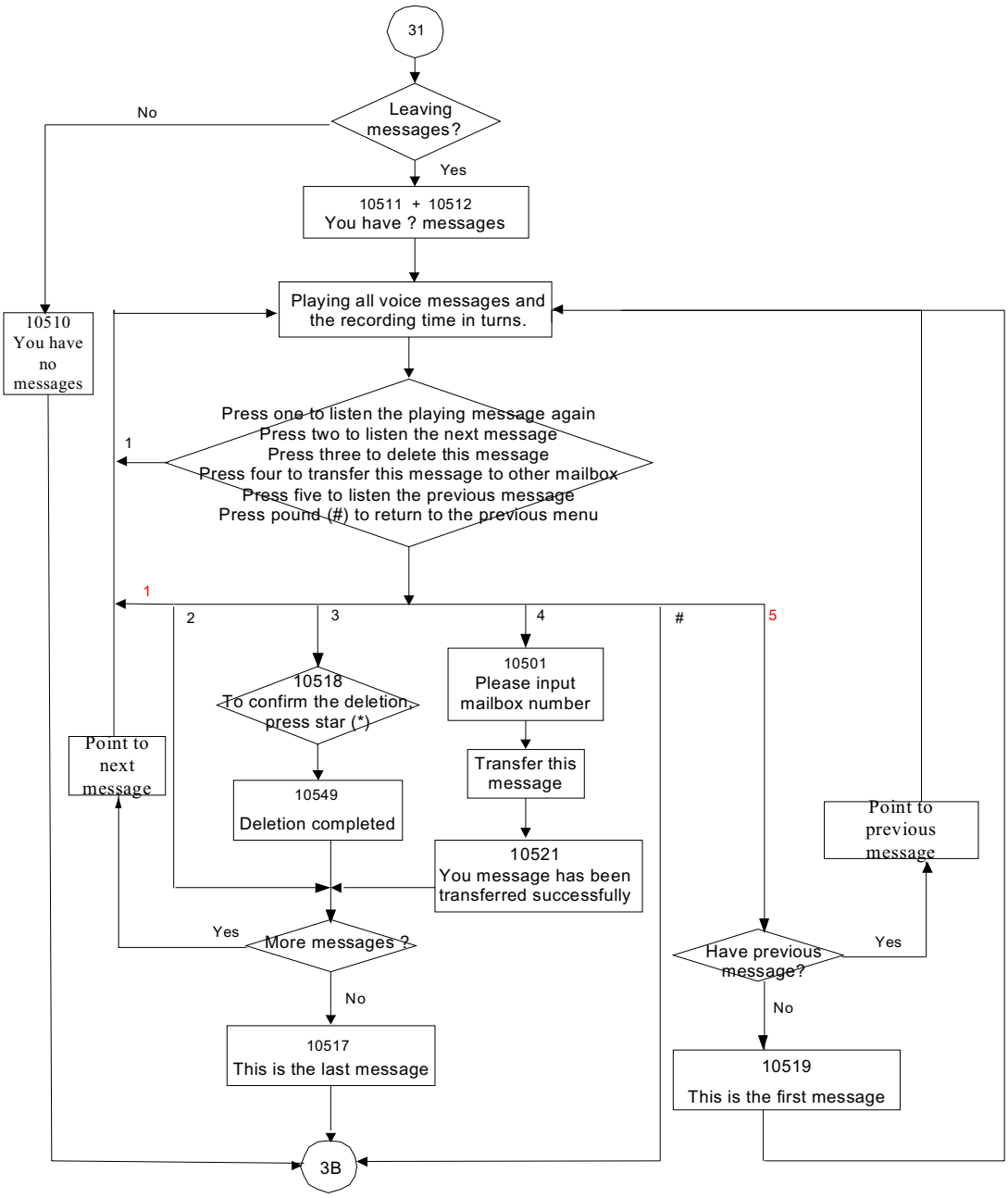
Appendix 3.2.2.1 Leaving messages



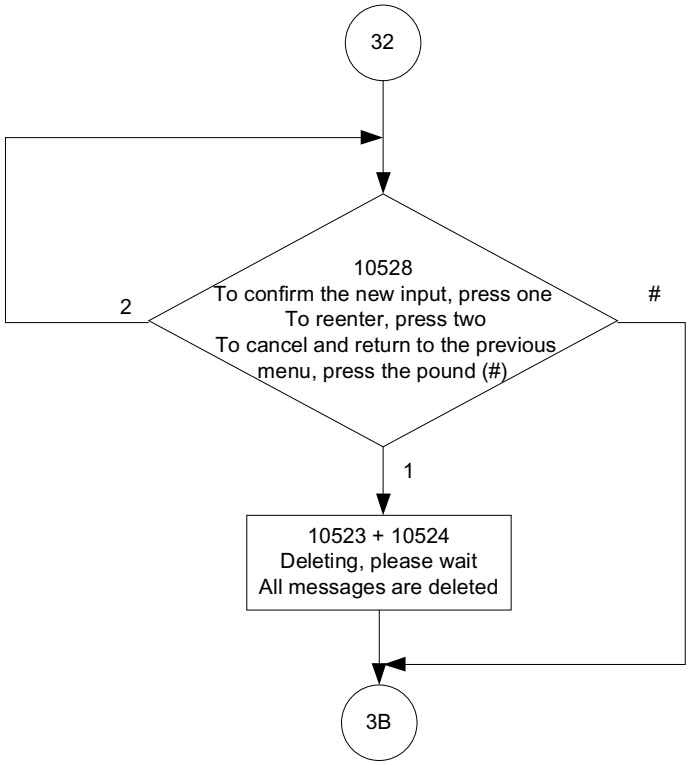
Appendix 3.2.3 Mailbox Administer Flowchart



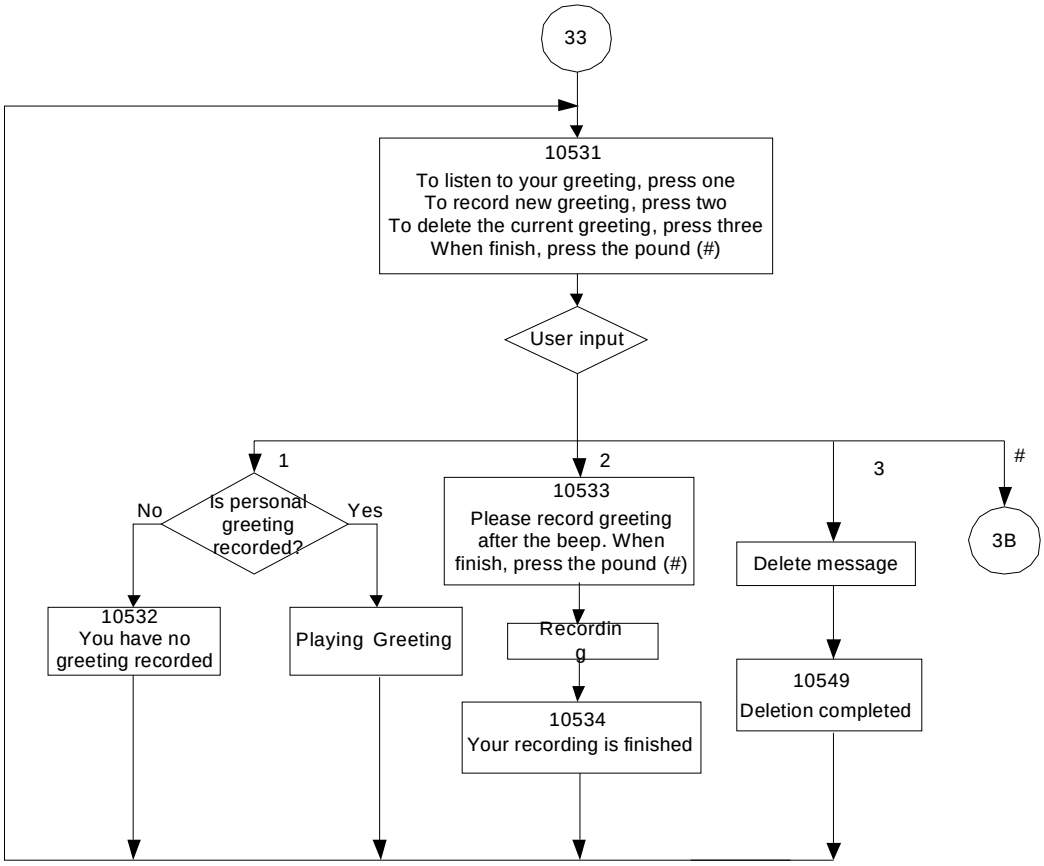
Appendix 3.2.3.1 Listening message



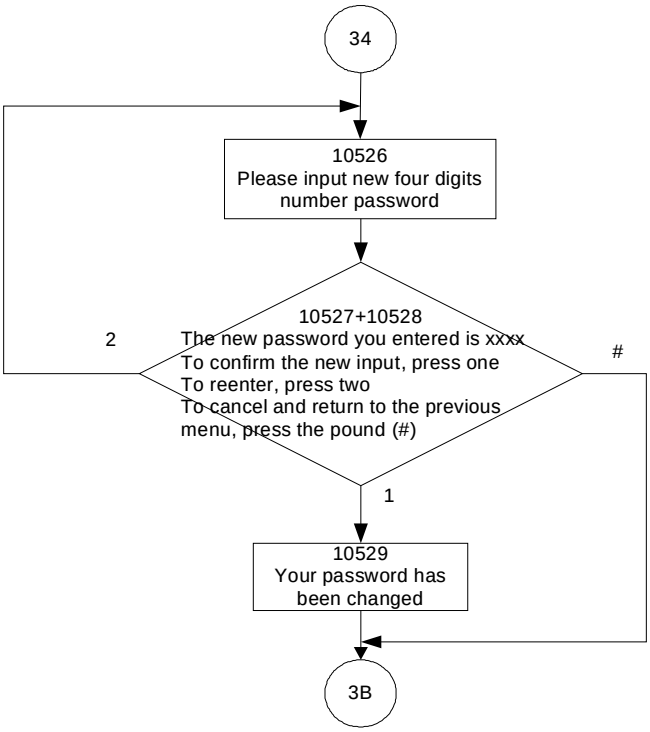
Appendix 3.2.3.2 Deleting all Messages



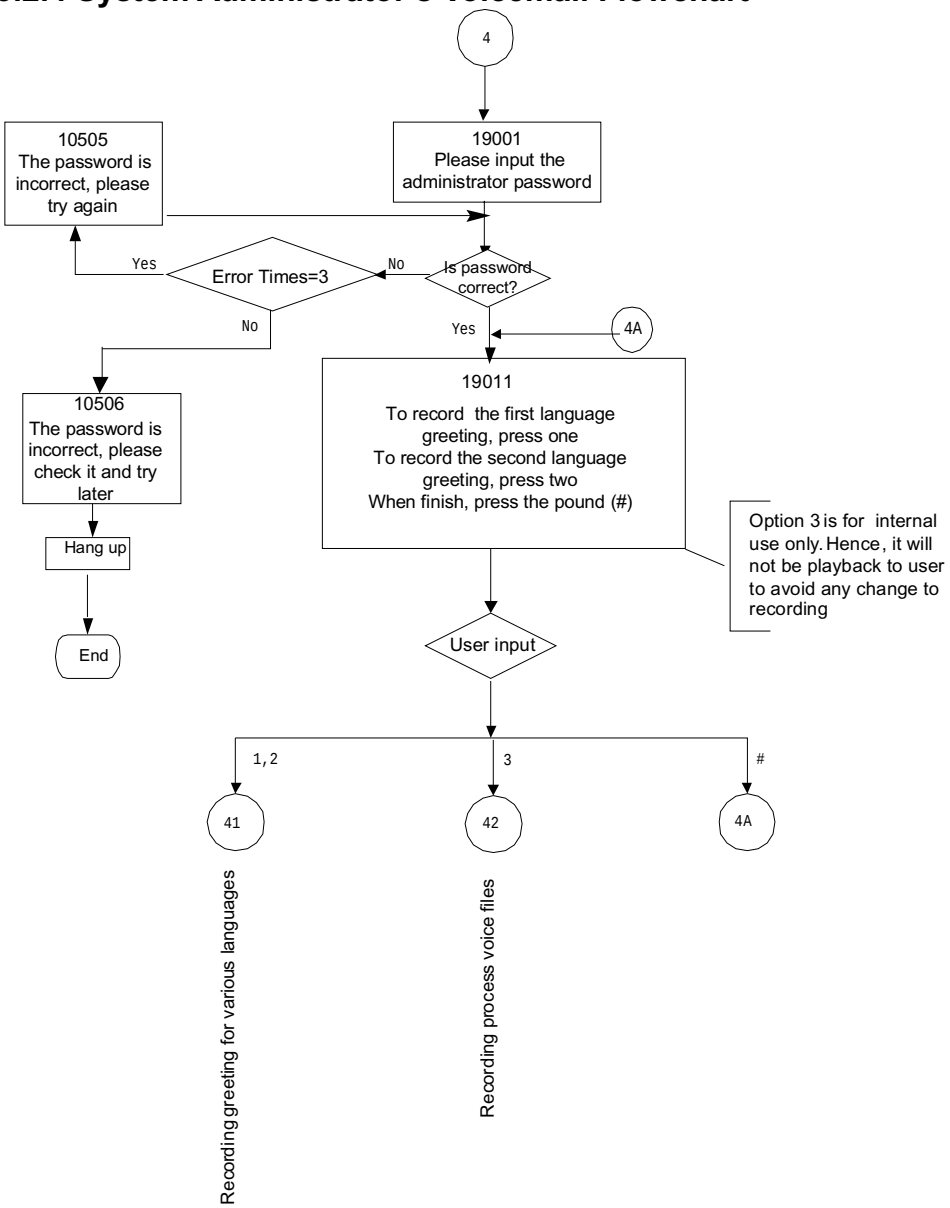
Appendix 3.2.3.3 Recording Personal Greeting



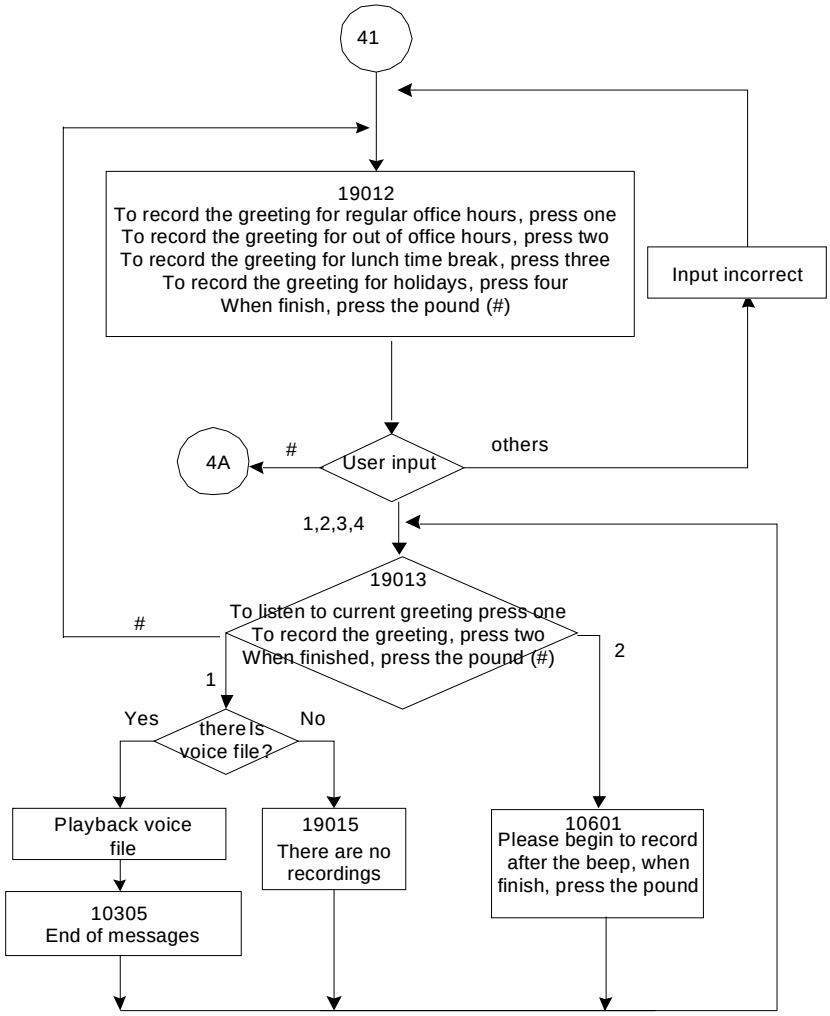
Appendix 3.2.3.4 Changing Mailbox Password



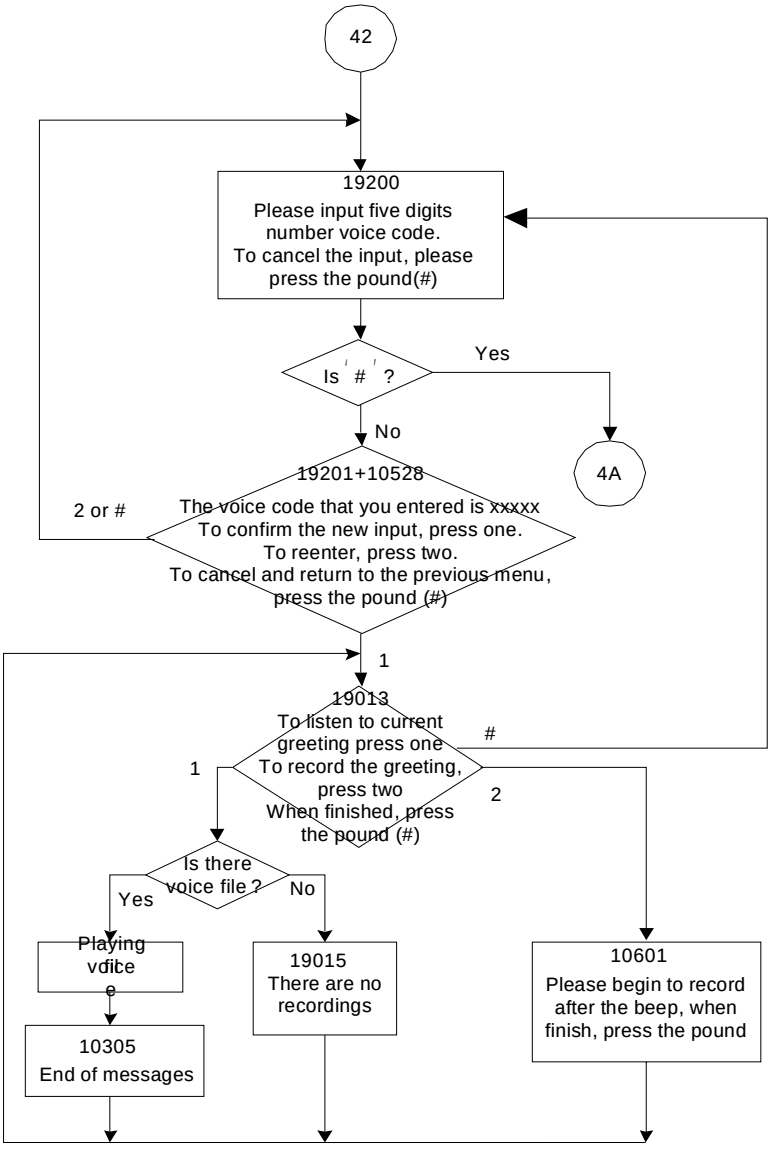
Appendix 3.2.4 System Administrator's Voicemail Flowchart



Appendix 3.2.4.1 Recording Various Greeting



Appendix 3.2.4.2 Recording Process Voice Files



Appendix 4: PTS/PTC

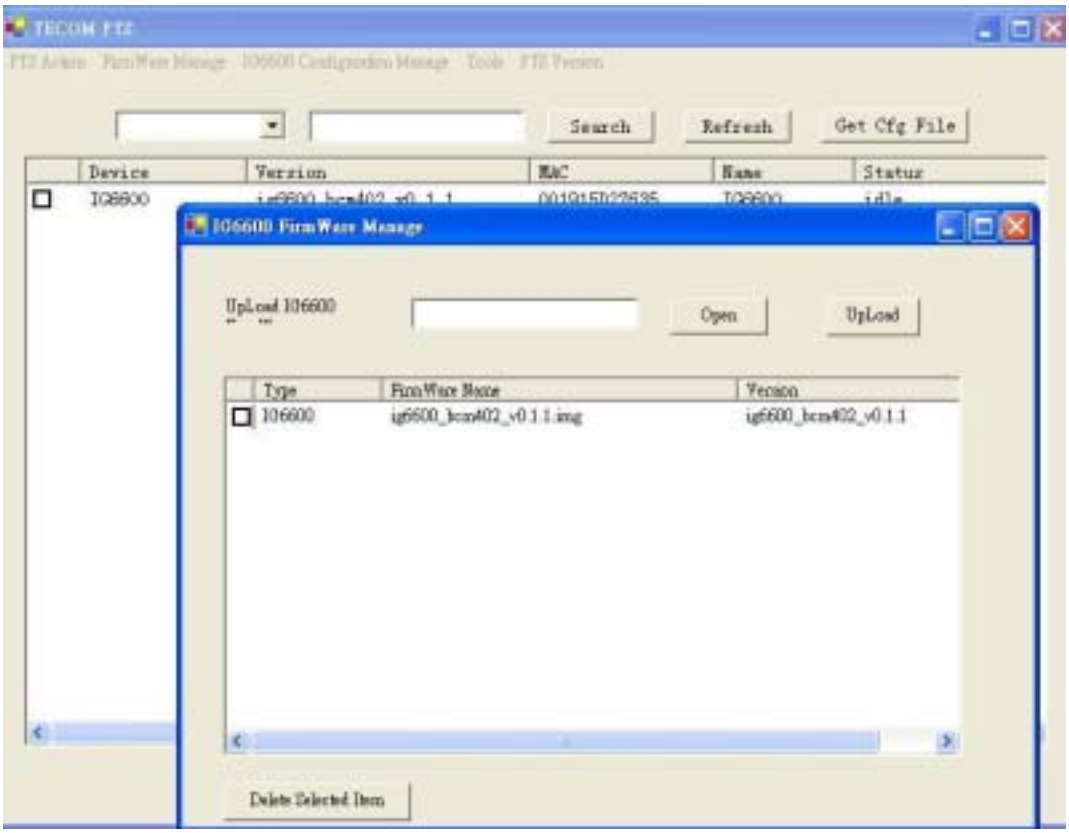
PTS and PTC is the remoter Management for IG6600.
PTS is the centralized management server run in the MS windows OS.
PTC is the terminal client run on IG6600.
PTS/PTC can update IG6600 firmware, update IG6600 configure file, update IP2032, IP2061 and IP2062 firmware.

Install PTS

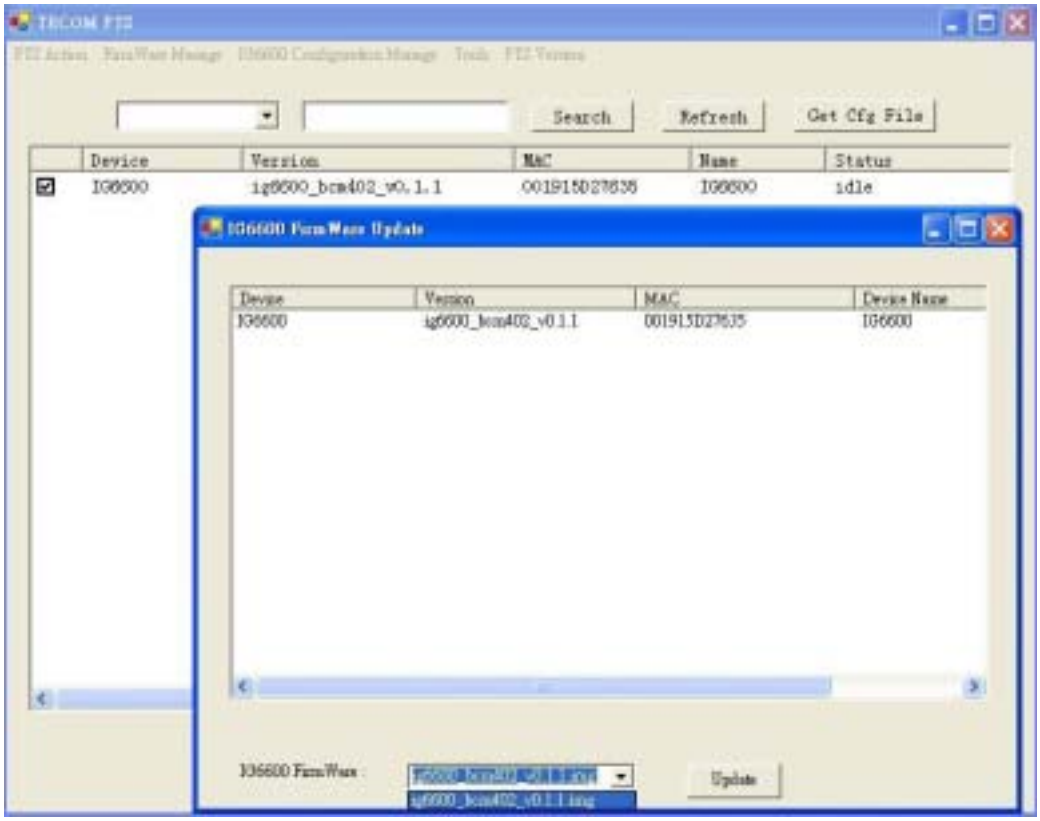
Run the Setup.Exe in PTS Release folder. First it will install the MS .NET framework 1.1 first and then install the PTS application.

Update IG6600 Firmware

1. Press “FirmWare manage” -> “IG6600 FW manage”, then upload firmware.

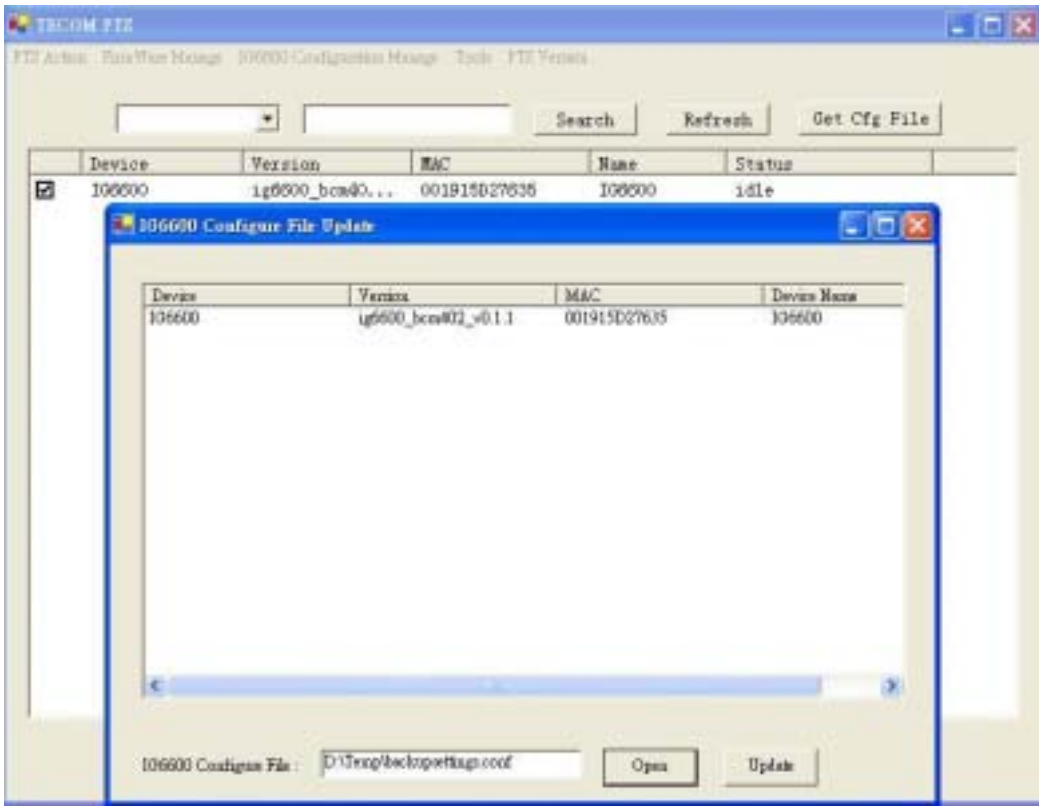


2. Press refresh button to show registered device in main form.
3. Selected device and press “PTS action” -> “IG6600 FirmWare Update”.
4. In “IG6600 FirmWare Update”, choose the firmware and press update button.
5. The PTS will inform IG6600 to download firmware when IG6600 register again.



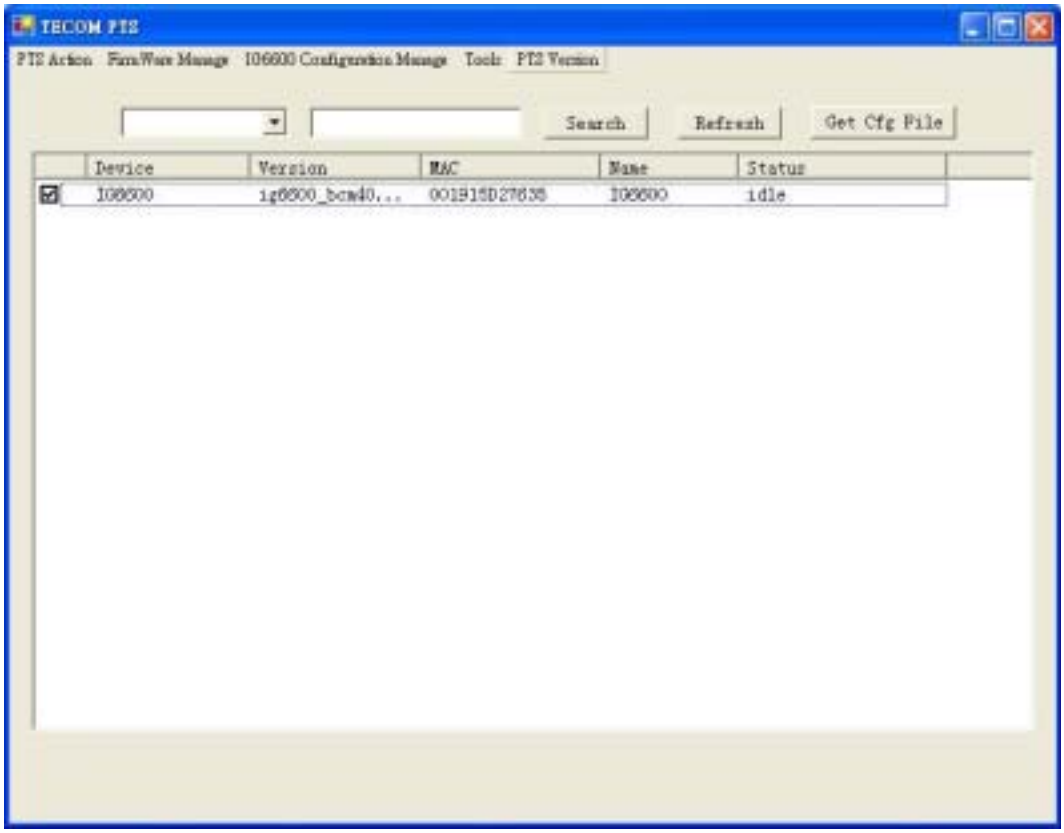
Update IG6600 Configuration File

1. Press refresh button to show registered device in main form.
2. Selected device and press “PTS action” -> “IG6600 Configure File Update”
3. In “IG6600 Configure File Update”, choose the configure file and press update button.
4. The PTS will inform IG6600 to download configure file when IG6600 register again.



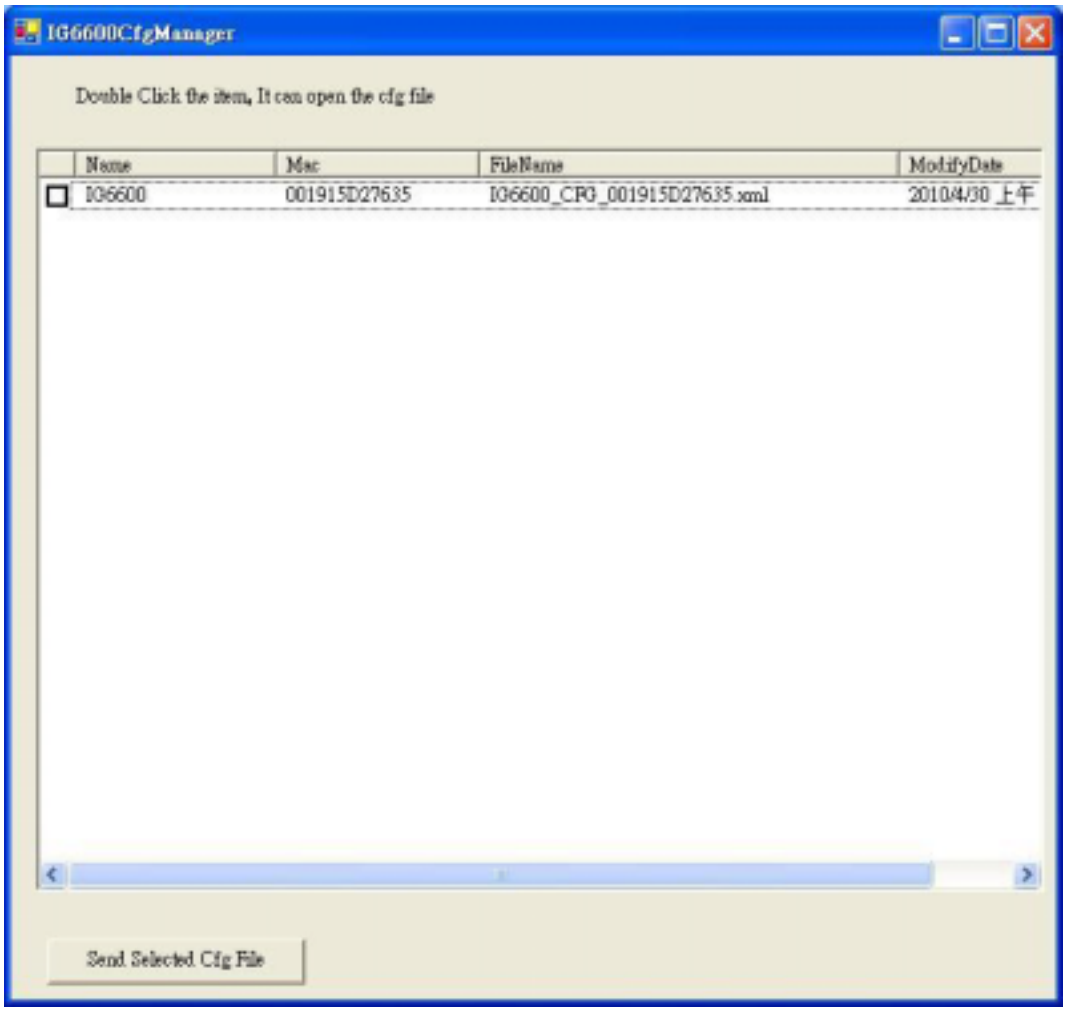
Receive IG6600 Configuration File

1. Select device at Main Form

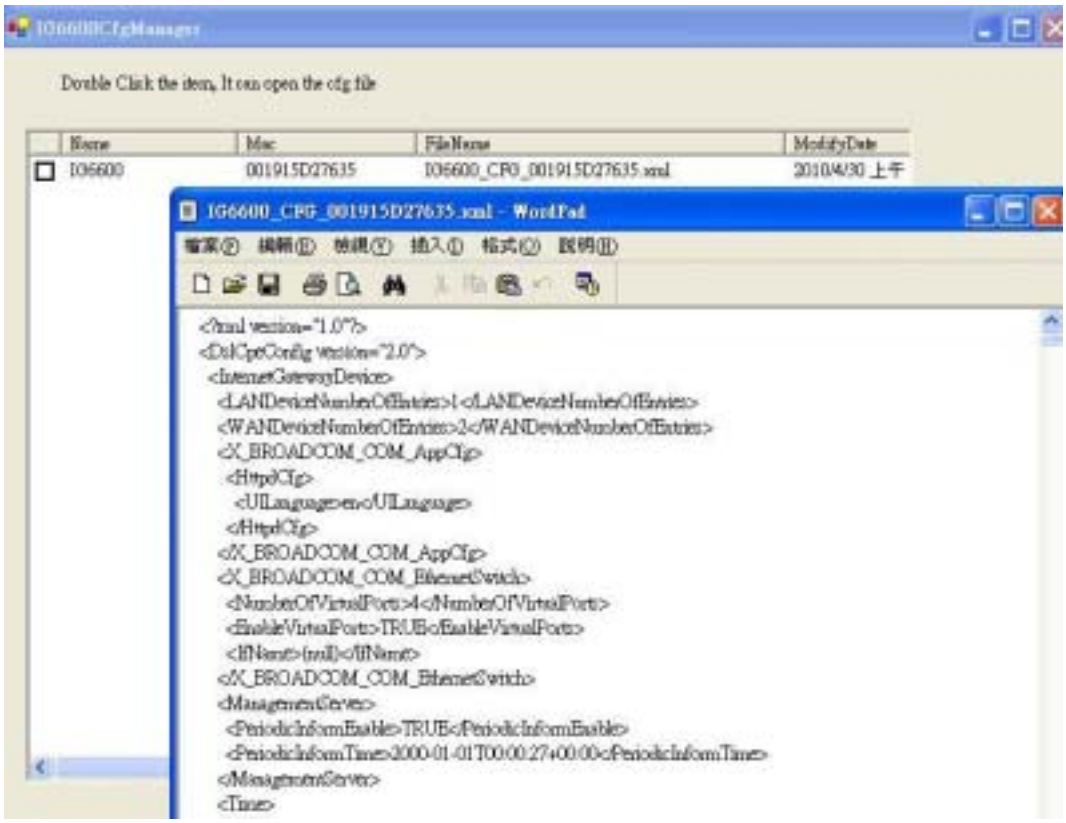


2. Press “Get Cfg File” button.

3. The status will change from idle to waiting and then loading. After status back to idle , press “IG6600 Configuration Manage” at the top menu



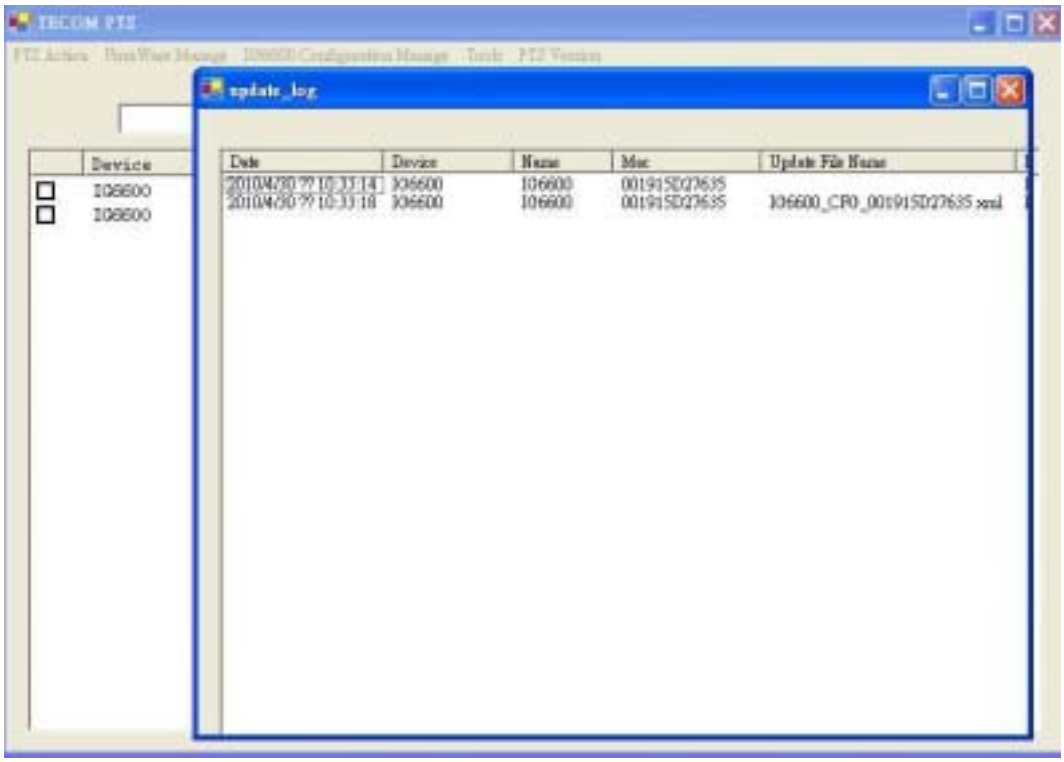
4. Double click the item, it will open the configure file as xml format. And you can edit the configure file (the tool which open the cfg file is the default xml edit tool on your PC)



5. After editing file, the configuration file can send back to IG6600 by pressing “Send Selected Cfg File” button

Show Update Log

Press” Tools” -> “log”, it will show the log of update



Set Working Time

Working Time configure is for update IG6600, IP Phone pending task.

Press “Tools” -> “Working Time”.